ON THE

TREATMENT OF PREGNANCY

COMPLICATED WITH

CANCEROUS DISEASE OF THE GENITAL CANAL.

BY

G. ERNEST HERMAN, M.R.C.P. Lond.,

ASSISTANT OBSTETRIC PHYSICIAN TO THE LONDON HOSPITAL.

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ON THE TREATMENT OF PREGNANCY COMPLICATED WITH CANCEROUS DISEASE OF THE GENITAL CANAL.

By G. Ernest Herman, M.R.C.P. Lond.,

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I begin by narrating two cases which have occurred under my own care:

Case 1.—*Cancerous tumour of rectum, obstructing delivery; cephalotripsy; peritonitis; death.*

(From notes by Mr. T. Mark Hovell, Resident Accoucheur.)

M. B—, æt. 30. Had had seven children, the last a year and nine months ago, the labour lasting about seven hours. Ten days after the confinement she began to have diarrhœa, which lasted on and off for about eleven months; for the last ten months fluid discharge from the bowel had been so constant as to prevent her from walking about.

I was called to her by Dr. Niblett, of Hackney, on account of the obstruction to labour caused by malignant disease of the rectum. She had reached, or nearly reached, the full term of pregnancy. She was without delay taken into the London Hospital. On examination per vaginam, a hard fixed tumour was felt projecting into the pelvis from behind. The antero-posterior diameter of the space left between this mass and the anterior pelvic wall, was, as nearly as could be ascertained, about $1\frac{3}{4}$ inches, there being room for two fingers to lie side by side in this diameter. In the lateral measurement, there was room for the whole hand. The os uteri was healthy, aud so was, to the touch, the vaginal mucous membrane. Examination per rectum showed that the wall of the bowel was converted into a firm, hard, irregularly ulcerated mass.

July 13th.—About 12.45 a.m. the os having reached nearly full dilatation, the patient was put under ether. The membranes were then ruptured, the head perforated, and then repeatedly seized and crushed with the cephalotribe, first in one direction, then in another, the position of the head being with ease altered (between the applications of the instrument) by bimanual manipulation. After a good deal of crushing, the head was extracted in the grasp of the cephalotribe. But it was found so difficult to drag the trunk and arms through the pelvis, that the head was detached with scissors, the trunk then pushed up, the feet brought down, and extraction thus accomplished. The placenta was expressed without difficulty. The labour was completed about 3 a.m.

Just after the ether was withdrawn, the patient became very pale, and the pulse very rapid and feeble. Some brandy was administered, after which her condition improved.

During the following four days the temperature rose, the patient complained much of pain, notwithstanding opiates; the last two days there was vomiting. After the second day the uterus was washed out twice daily with Condy's fluid and water.

She died on July 17th, at 1.10 p.m. The *autopsy* was made on the following day by my colleague Mr. M'Carthy. There was peritonitis, puriform fluid being found in the peritoneal cavity. About two inches above the anus, there was stricture of the rectum, caused by a great cauliflower looking mass, which had invaded the mucous membrane, and extended through the wall of the rectum involving the vagina. On the inner surface of the cervix uteri were found some small superficial sloughs of the mucous membrane, and underneath these there was suppuration.

Case 2.—*Cancer, with fixation, of cervix uteri; pregnancy; copious hæmorrhage; abortion induced at end of fifth*

month; marked relief to symptoms. Death seven months afterwards.

(Reported by Dr. S. D. CLIPPINGDALE, Resident Accoucheur.)

A. S. R—, grocer's wife, æt. 33. Admitted into the London Hospital June 18th, 1877.

She stated that her health had been good until marriage. The catamenia appeared at twelve, were always regular, usually lasted five days, were profuse, and accompanied by a good deal of pain, which, however, was never severe enough to lay her up. During the day or two previous to the menstrual period, she used to suffer from epistaxis on any exertion: she said that by this she knew when the time was approaching. She was married between eighteen and nineteen, and there was a tolerably clear history of syphilis having been communicated to her soon afterwards. She had had eight children, the last two years before admission: good times with all of them.

She attributed the illness for which she was admitted to "worry and exertion" during a menstrual period in the preceding February. At that time the flow, instead of lasting five days only, became continuous. At the end of three weeks she consulted a medical man, who gave her some medicine, the taking of which was followed by labour-like pains, and arrest of the hæmorrhage for a few days. It then returned, and continued daily till admission. Its amount varied, from one to seven napkins a day having been usually required, but it was often severe enough to cause faintness. Since the beginning of the hæmorrhage she had suffered from a sharp "stabbing" pain in the left inguinal region, which was constant, and worse at night, and from a bearing-down pain in the hypogastrium, which she described as extending down the passage: this latter pain was worse when the flooding abated. The inguinal pain was not affected by the amount of hæmorrhage. Neither of these pains at all resembled the pain of a menstrual period, or that of labour. There was also pain in the back. For the two months preceding admission she had had pain and difficulty in micturition,

having, as she expressed it, to "force" very much. There was never any want of control over the bladder. The bowels had been generally constipated, and their action was accompanied with bearing-down pain. She had lost flesh, strength, and appetite. She had been under medical treatment, and had kept her bed during nearly the whole of her illness prior to admission.

On July 3rd, the following was her condition:—She was wasted, anæmic, and of the "faded leaf" complexion. The fundus uteri reached two-thirds of the distance between the pubes and umbilicus, and the fœtal heart could be heard over it. The cervix uteri was greatly and irregularly thickened in its whole circumference, large masses of new growth projecting from it, especially from its right side. It was low in the pelvis, and quite fixed. There was no evidence of disease in any other organ. Her urine was acid, and contained no albumen.

On July 5th she was seen in consultation with me by my colleague Dr. Palfrey, who concurred in the diagnosis of malignant disease of the cervix, with pregnancy, and in the proposed treatment; viz. the speedy evacuation of the uterus.

July 7th, 10 a.m.—The patient being under ether, the cancerous tissue was destroyed with Paquelin's thermo-cautery, as freely as was judged safe. By this means, the cervical canal, into which previously a sound could only be be passed with difficulty, was made large enough to admit two laminaria tents of moderate size, which were then inserted. At 3 p.m. she began to suffer from much pain, which continued during the night.

July 8th, at 10 a.m.—The tents, which were well expanded, were removed. A finger could be easily introduced into the uterine cavity, but as it was not practicable to grasp and withdraw the fœtus, four laminaria tents were put in. The temperature, which had been 99° when the first tents were inserted, was now 102·6°.

July 9th, at 1.30 a.m.—The resident accoucheur was called to her, on account of labour pains having set in.

The temperature was 104·7°. A plug, which had been placed in the vagina, had been expelled: this had been followed by one of the tents, fully expanded, and this by a portion of the fœtus. The resident accoucheur, on his arrival, removed the rest of the fœtus, the remaining tents, and the placenta, all of which were lying loose in the canal formed by the vagina and the dilated cervix. At 10 a.m. the temperature had fallen to 99°.

During the next few days, the temperature ranged between 99° and 102°. There was a good deal of abdominal pain, tympanitic distension, and vomiting. The discharge from the genital organs was slight in quantity, but fœtid. The vagina was syringed out twice daily with Condy's fluid and water. There was no more hæmorrhage from the time of the abortion until thirty-eight days afterwards, when what the patient considered her usual menstrual flow came on. After this she had no return of the bleeding while in hospital.

Five days after the abortion some redness and painful swelling appeared about the angle of the left lower jaw, apparently due to inflammation of the submaxillary glands. This subsided, without suppuration, in about a week.

In the third week after the abortion a firm mass could be felt in the left iliac fossa, reaching about halfway to the umbilicus. This was believed to be the result of perimetritis; and by this, and the glandular inflammation above mentioned, the pyrexia which followed the operation was accounted for.

The temperature fell to normal at the end of the third week; but slight elevations of temperature took place occasionally, without any fresh cause of pyrexia being discovered, up to the time of her leaving the hospital. She was allowed to get up on the thirtieth day. About ten days before she left the hospital she began to complain of pain in micturition; and the urine was now found to be alkaline, and to contain much pus.

She considered that her condition had greatly improved after the abortion, as compared with what it was before

she came into the hospital. Hæmorrhage had ceased; her pain was less, and appetite had improved.

She returned to her home on August 24th, 1877. She died there, on February 2nd, 1878. As the village where she lived was some distance from town, it was not possible to obtain a post-mortem examination.

For particulars of another case, not hitherto published, which will be found in the tables which accompany this paper, I am indebted to Dr. Matthews Duncan. I have also to thank Dr. Clement Godson for some additional facts relating to a published case of his. A case, published by Dr. J. W. Kay, and included in the tables, I saw with him.

Cases in which delivery is obstructed by cancerous disease, whether of the cervix uteri, vagina, external genitals, or rectum, have in common their most important features. These cancerous tumours cannot be pushed aside, nor can they be lessened in bulk by tapping, or any such simple means; when bruised and torn, they have no tendency to repair; as they grow, they produce a cachectic condition of body, and as, until they have made some progress, they are not large enough to greatly obstruct delivery, the patients, in whom they do considerably hinder the birth of the child, are nearly always much enfeebled by this cachexia; and lastly, they invariably, within no very long time, destroy the life of the mother. Seeing, further, that cancer beginning in one of these parts is seldom far advanced without to some degree spreading beyond its original seat, it seems to me that all cases in which cancerous disease obstructs delivery, may, from an obstetric point of view, be properly considered together. Agreeing, as they do, in their broad clinical features and course, the differences depending upon locality, and the consequent modifications in practice, are in comparison slight and easily seen.

This complication of labour is one both grave and difficult, and it is one as to the treatment of which those obstetric authorities to whom the profession in this country is accustomed to look with the most confidence, speak with hesitation. Some writers, it is true, have made more or less definite statements as to what ought to be done; but I think it may be fairly said that there exist no rules recognised by common consent as those which ought to guide practice. The subject therefore is one for the discussion of which no apology is needed.

Fortunately, or unfortunately, cases of the kind do not occur frequently in the practice of any one individual; and therefore it is necessary, in order to estimate from a broad basis the advantages and drawbacks of the different resources at our command in these cases, to have recourse to the recorded experience of others. This has been done by several writers. Hachmann,[1] in 1836, put together 19 cases. Puchelt, in his book[2] published in 1840, a work quoted by many subsequent writers, gives 27 cases. But many of them are from very old writers, by whom medical terms were not used with modern precision: in some of these there is not sufficient detail given to satisfy a critical reader that cancer was present; in others, the facts stated are such as are very rarely met with in cancer; and in others, the disease is expressly stated to have been situated at the fundus, and to have stopped at, or short of, the cervix; cases the cancerous nature of which is exceedingly doubtful, and which, whether cancer or not, certainly should, in drawing conclusions, be separated from those cases in which the growth obstructs the passage of the child. In these opinions I am not alone, for Chantreuil[3] (p. 4) remarks on "the unfortunate confusion which exists in this often quoted work, between the different kinds of uterine tumours which may complicate

[1] 'Siebold's Journal,' bd. xv, s. 602.

[2] 'Comm. de tumoribus in pelvi partum impedientibus,' Heidelberg, 1840.

[3] 'Du cancer de l'uterus, au point de vue de la conception, de la grossesse, et de l'accouchement,' Paris, 1872.

pregnancy." Lever,[1] in his monograph on tumours obstructing parturition, published several original cases, together with some old ones, including those of Puchelt. Dr. West,[2] in his work on diseases of women, collected and tabulated all the then published cases, in a manner more complete and exhaustive than anything which had gone before. But his figures include those of Puchelt: his analysis is not carried to any great detail; and since the last edition of his work was published, many more cases have been recorded, so that I think it is possible now to reason from wider and more accurate premises than Dr. West could in 1862. In 1872 Chantreuil[3] published a monograph containing narratives of 60 cases, many of them admirably full. He, as I have mentioned, rejects most of those given by Puchelt. His work is rather a collection of cases with commentaries on them, than an attempt to systematise and make precise our knowledge of the subject. In 1873 Cohnstein[4] published an elaborate paper, based on 134 cases. I should not have gone to the trouble of making a similar collection, had I not found on examination, that Cohnstein, like some of his predecessors, includes all Puchelt's cases; that he inserts some others, the accounts of which seem to me against the fact of their being cancer; that some cases he has not accurately quoted, and that he does not give enough detail to make it possible to bring out all the facts which I think it is possible to ascertain. I have, however, to acknowledge the great assistance I have received from Cohnstein's table, in finding records of cases. I have quoted from the original in nearly every case; where I could not get at the original, I have mentioned the authority quoted from. My table includes a good many cases not included in Cohnstein's table; some are taken from Chantreuil, whose work

[1] 'Observations on Pelvic Tumours obstructing Parturition, with Cases,' London, 1842.

[2] 'Lectures on Diseases of Women' (Lectures XIX, XX, XXI).

[3] Op. cit.

[4] 'Archiv für Gynækologie,' Bd. v, s. 366.

Cohnstein does not seem to have seen, but many have not been included in any previous table.

I have collected records of 180 cases, and have classified them according to the way in which the pregnancy was terminated; and in each group I have divided the cases into those which ended, as to the labour, favorably or successfully, and those which did not. All cases which survived the puerperal month I have classed as favorable or successful cases; those which died before the termination of the month, as unfavorable, or unsuccessful cases. In a complex condition such as this, it is not always possible to ascertain how far death is due to the labour, and how far to the cancer, even at the post-mortem table; much less when one is dealing with somewhat fragmentary records. Therefore, it is necessary to make a rough division, and I think most will agree, that in cases dying within a month after delivery, it is probable that the casualties of labour contributed to, or accelerated death; and in some it will be seen that this is clearly the case.

My cases include 51 delivered by the natural efforts alone, 35 with success, 16 without; 9 in which delivery was aided with forceps, 5 of them successful, 4 not; 14 in which turning was performed, in 6 cases with a favorable result, in 8 without; 14 in which incisions were made into the cancerous cervix, 11 times with success, in 3 cases without; 12 cases in which craniotomy was performed, 3 times with a favorable result, 9 times with the reverse; 12 cases in which the Cæsarean section was performed, 4 times successfully; 11 cases which terminated by rupture of the uterus; 13 in which the patients died undelivered; 10 in which the cancerous part was removed during pregnancy, and 5 in which it was either removed or spontaneously detached during labour; 20 in which the pregnancy ended in abortion; and lastly, 9 concerning which the information given is too incomplete for classification, although they all illustrate some point in connection with the question.

In a disease such as cancer, in which individual cases

differ so widely from one another, and in which we have no means of accurately measuring its size, stage, and rate of growth, it is not possible, except by working from an immense number of cases, to express with accuracy in a numerical form the general facts derived from them. The wider the differences between individual items, the larger are the numbers required before it can be expected that the differences will neutralise one another. Therefore, although I shall express the facts as exactly as possible, I shall not endeavour to formulate generalisations with the same precision.

Before considering the management of labour, there are some points in the natural history of this condition which seem to me worthy of attention. The first of these is, *the influence of cancer of the uterus upon conception.* Many of the old obstetricians (*e. g.* Mauriceau) were under the impression that conception was impossible when the uterus was the subject of cancer, and several writers upon the subject have thought it necessary to begin by refuting this opinion. Cohnstein[1] goes further, and maintains that cancer rather favours the occurrence of pregnancy. He bases his opinion on the facts, first, that cases of pregnancy complicated with cancer seem to occur in greater number during the latter part of the childbearing period; while these years, in healthy women, are the least prolific. He considers that this reversal, in cases of cancer, of the usual ratio of fertility, is due to a greater aptitude for conception brought about by the cancer. But it appears to me that this is easily accounted for by the fact, that cancer is more common during these years, and that therefore its complication with pregnancy may be expected to be more frequent also. Next he quotes a case in which, with the appearance of cancerous disease, conception took place, after an interval of twelve years of sterility. One case, however, does not prove much. Lastly, he points out, that in some cases cancer has been accompanied with increased sexual desire. But this does not prove fecundity.

[1] Op. cit., s. 369.

Instances of cancer of the uterus occurring before the climacteric are, however, not so rare but that, if this disease at all favoured conception, cases of its complication with pregnancy would be more frequent than they seem to be. Of the 180 cases which I have collected, in many the symptoms of disease first appeared during pregnancy, and therefore the number of those who conceived while suffering from uterine cancer would be represented by a smaller figure. D'Outrepont[1] remarks, that it is difficult to understand the development of an ovum in a uterus, the body of which is the subject of cancerous disease. And it would seem both possible and probable, that where there is so much new growth, and consequent swelling of the cervix as to hinder the exit of the menstrual fluid,[2] the same cause may prevent the entrance of the spermatozoa. These considerations lead me to think that there is some ground for the opinion of the older authors; and that such influence as cancer of the uterus has upon conception is adverse to its occurrence.

I wish next to remark upon *the influence of the cancerous cachexia upon the life of the child*, irrespective of the risks attending the process of delivery.

My table of cases includes twenty in which the pregnancy ended in abortion,[3] but in two of these it was artificially induced.[4] Hachmann[5] says that probably a great many of the copious losses of blood which accompany uterine cancer, are really unrecognised abortions. This is a supposition very difficult either to verify or to disprove; but it unquestionably has this basis of probability, that abortion may very easily be overlooked, or we may

[1] 'Abhandlungen und Beitrage Geb. Inhalt,' 1822, Erns Theil, s. 276.

[2] Bernutz and Goupil, 'Diseases of Women,' vol. i, part 1, case xxii.

[3] The term abortion is here used to denote that the ovum was discharged before the fœtus had reached a viable age. By premature labour is meant delivery at any time between the sixth and ninth month.

[4] According to Whitehead the average frequency of abortion in women generally, is rather more than one to every seven pregnancies.—('On Sterility and Abortion,' p. 245.)

[5] Op cit., s. 621.

be unable to prove that it has taken place; that among the poorer classes, among whom the cases reported in medical journals usually occur, it often does take place, without the patient thinking it necessary to seek medical advice, and that the symptoms of cancer may mask those of early pregnancy, while the cancer is enough to account for such symptoms as usually accompany early abortion; and therefore I am disposed to think, that the actual frequency of abortion may be greater than is represented by these 18 cases.

Putting aside these 20 cases of abortion, and excluding also those instances in which the mother died undelivered, or in which rupture of the uterus took place, those cases in which the means used for delivery were such as to sacrifice the infantile life, and those in which the cancerous part was removed during pregnancy (for in them the development of the disease, and consequently its effect on the system, may be supposed to have been interfered with), there remain 114 cases.

Of these, in 34 labour came on prematurely; 23 went to their full time; in one labour was prematurely induced, and in the remaining 56 the period of pregnancy at which delivery took place is not stated. It would seem, therefore, that cancer tends to produce premature expulsion of the embryo; and as the chances of life of premature children are less than those of children born at term, in this way the existence of cancer is inimical to the child's life.

Out of the 114 children, 58 were born alive, 36 dead; in 20 the fate of the child is not mentioned. Out of the 36 dead, 12 are stated to have been decomposing; in them, therefore, the death was quite independent of the process of labour. In the remaining 24 the cause of death is not stated; but of these, the unduly large proportion of 13 were premature. Now, were the deaths due simply to the effects of protracted labour, one would expect the greater mortality to be among the bigger children, which is not the case. If we examine the kind of labour with these 24

dead children, it is found, first, as to time, that in 7 the labour occupied less than 48 hours, and in 4 out of this 7, less than 24 hours. In 8 it lasted more than 48 hours, and in the remaining 9 its duration is not stated. Therefore, although in some the labour was very protracted, yet it was not so in all. Next, as to the kind of delivery, 11 were delivered by natural efforts, 6 by turning (in one case combined with incisions), 3 by forceps combined with incision of the cervix, one by Cæsarean section; one was a footling case, the head being delivered by forceps; the facts of the other cases are not mentioned. It is probable, therefore, that the deaths of some of these children took place in the process of delivery; but in some there are no facts to account for death so caused. Owing to the fragmentary nature of the reports, it is not possible to arrive at the proportions. Looking at the facts in another way:—out of the 35 premature children, 15 were stillborn; out of the 23 at full term, 5; and out of the 56 whose intra-uterine age is not stated, 16 were stillborn; in other words, a mortality of 42·8 per cent. among the premature children, 21·7 per cent. among those born at term, and 28·5 per cent. among those whose degree of development is not stated.

These facts, I think, all tend to show that, in cases of pregnancy complicated with cancer, there is a considerable infantile mortality which is not due to circumstances connected with labour, but to causes acting before birth, death either occurring in utero before the commencement of labour, or being due to the feeble vitality of the prematurely expelled children. It is also probable that, had information on the point been given in all cases, it would have been found that a larger proportion of the children than appears had died in utero.

It therefore seems to follow that the cancerous cachexia tends, *per se*, to produce, not only the premature expulsion, but the intra-uterine death of the child.

Another point which seems to me both of interest and importance is, *the influence of pregnancy upon the cancer.*

It is stated by some writers, that during pregnancy the cancerous disease remains in abeyance, that there is a diminution in its symptoms and in the rapidity of its progress. With whom this belief originated I do not know, but it is quoted as a fact by several authors. Other writers, among them Chantreuil[1] and Barnes,[2] take the opposite view, that pregnancy makes the cancerous growth more active. This is a question on which it is very difficult, if not impossible, to get direct evidence. In only a minority of my cases is the duration of the disease mentioned; and in these, the dates are not fixed with much precision. But even if data could be got at, by which the average duration of cases complicated with pregnancy could be compared with that of cases not so complicated, the comparison would not have much value; for, first, the contingencies of labour would vitiate any conclusion drawn in favour of the view taken by Chantreuil; and next, although cancer undoubtedly has an average, yet individual cases depart so widely from that average, that a very large number of cases would be needed to establish any law of this kind. The belief that the growth of cancer is retarded during pregnancy, is to some extent supported by some cases in which symptoms were slight or absent until delivery, when the disease was found to be advanced. Although my table includes a few of this kind, there are none in which, cancer having been present before pregnancy, any abatement of symptoms followed conception. The only piece of direct evidence that I have been able to find, is a case by Spiegelberg,[3] who says, "I saw a commencing small cancroid of both lips of the os remain constant, of the same extent and form from three months pregnancy to delivery at term; in labour it caused very little disturbance, and after that grew more quickly."

But I think that every consideration derived from what we know of the conditions influencing the process of

[1] Op. cit., p. 24.

[2] 'Clinical History of Diseases of Women,' 1st edition, p. 830.

[3] 'Lehrbuch der Geburtshulfe,' s. 295.

growth, and the progress of disease of other kinds and in other parts, tends to support the opposite view. We know that an abundant blood supply favours cell growth, and that a deficient blood supply hinders it. We know that the most vascular cancers are the most rapidly growing. Therefore I think we should expect the great afflux of blood to the genital organs in pregnancy to be followed by an increase in the rate of growth of cancerous disease in that part. A case is recorded by Mattei[1] which affords direct evidence of this in the case of the breast. In a patient, aged 42, during the early months of pregnancy, a small induration was perceived in the left breast, and this distinctly increased in size up to the ninth month. It was painful, and the pain went down the left arm. After delivery, the right breast secreted milk freely, but the left remained small. The induration then ceased to increase, but no treatment was successful in making it disappear. Six months after delivery she again became pregnant, and during this pregnancy the left breast became larger and harder, and an induration became perceptible in the right breast. The left breast then began to ulcerate, and its cancerous nature became unmistakable. Mattei remarks upon its excessive increase with the mammary congestion of pregnancy.[2] In one case in my collection (97) it is stated that the symptoms became aggravated after conception had taken place. But the course of the cases after delivery throws more light upon the subject. Those which recovered from the labour generally recovered well, without a bad symptom, and in many of them great relief and improvement is recorded as having followed the removal of the developmental stimulus. Thus, in one of Robert Lee's cases (22), it is said that "pain, discharge, and other symptoms, almost entirely disappeared for several months after confinement." In the case (31) recorded by Bagli and Cazal, it is said that the patient after delivery "regarded herself as cured." In Oldham's case of

[1] 'Clinique Obstetricale,' obs. celxxviii.

[2] See also 'Brit. Med. Journ.,' Sept. 7 and 28, 1878.

Cæsarean section (101) the patient had suffered most severely during pregnancy; but six weeks after the delivery it is stated that "the disease had shrunk somewhat, the discharge was not very abundant, she had been free from the ordinary cancer pains, and her general health was well supported." In Greenhalgh's successful case of the same operation (102), it is said that "for more than six months after the operation, the disease, which was advancing rapidly, underwent considerable improvement, the hæmorrhage and pain ceasing, and the local affection dwindling to an almost inappreciable degree." In my own case, already narrated, of induced abortion, the relief to symptoms was very marked. Other cases might be quoted, which agree with these, although the facts are expressed in a less striking way (1, 4, 32, 36, 37, 38, 137, 138). Now when we remember, that it is more common for cancer of the uterus to be unattended with symptoms in the early than in the late stages of its progress, it seems to me that these cases tell much more strongly in favour of the view of Chantreuil and Barnes than cases in which symptoms were absent during pregnancy do against it. And that even when we find that no relief, but rather aggravation, followed labour, it can be accounted for by the injuries received in the parturient process, and by the natural course of the disease, without resorting to the theory that it is in consequence of the withdrawal of an inhibiting agency. Therefore I think that Spiegelberg's single case is an exceptional one, and that the rule is, that cancer of the uterus grows faster during pregnancy than at any other time.

There is an effect of pregnancy upon cancer of the uterus, upon which stress has been laid, as being of value in diagnosis. I mention it, although I cannot throw much light upon it, in the hope that others may do so. Chantreuil[1] gives as one of the characters of non-malignant induration, that it softens towards the end of pregnancy, and in opposition to this speaks of the hardness of can-

[1] Op. cit., p. 57.

cerous disease. Scanzoni,[1] on the contrary, says that during pregnancy cancer softens, while hypertrophy of the cervix remains hard. In one of Madame Boivin's cases (1), she mentions that as pregnancy advanced, the cancer became softer; and Dr. George Roper, who has seen and put on record some cases of labour complicated with hypertrophic elongation of the cervix, tells me that in them the cervical tissue remained of grisly hardness throughout pregnancy. The testimony of those two good observers is therefore in favour of Scanzoni's view.

That cancer of the uterus when in an early stage, and only affecting a small portion of the os, may allow delivery to take place without hindrance, I think hardly needs proof. That few cases of the kind are recorded, is possibly partly due to the difficulty of diagnosis of commencing cancer. Uncertain as this is in the non-pregnant condition, it is probably still more problematic when the changes due to pregnancy coexist. Chantreuil[2] says, "We doubt if there is any observer who can affirm, from a simple physical examination of the cervix, however perfect, that cancer exists before the period of softening has arrived." Through the kindness of Dr. Matthews Duncan, I have seen two cases of cancer of the uterus in which delivery had recently taken place, and in which the disease was so far advanced, that Dr. Duncan judged that it must have been present before labour. But I ascertained from the medical men in attendance, that in neither case was cancer suspected at the time of labour. In one case nothing was noticed wrong with the os uteri, in the other only some rigidity. (As, however, there is no direct evidence that cancer existed, I have not included these cases in my table.)

Spiegelberg[3] says, "If the disease be confined to one lip, so that in the circumference of the os there yet remains a part unaffected by it, and dilatable, there may

[1] 'Lehrbuch der Geburtshilfe,' 2te auflage, s. 467.

[2] Op. cit., p. 57.

[3] Op. cit., s. 513.

be no difficulty in the labour, the stages of dilatation and expulsion progressing without disturbance." This statement, although perfectly correct so far as it goes, yet requires to be supplemented by others. An examination of the cases I have collected, shows, first, that even with cancerous disease so advanced as to affect the whole circumference of the os, labour may be short and easy; delivery may take place by the natural efforts alone; and after delivery under such circumstances, the patient may recover without a bad symptom, and life be subsequently prolonged for months. Thus in a case reported by Benicke (12), there was advanced carcinomatous degeneration of the whole lower part of the uterus and the vaginal wall, the solid infiltration being felt extending to the wall of the pelvis, and Cæsarean section was thought to be unconditionally indicated. But, after hardly any pains, a dead child, of about eight months intra-uterine age, was found between the patient's thighs. In a case quoted by D'Outrepont (35) on the authority of Delbech, the cervix uteri is described as having been entirely destroyed; in place of it was a broad ulcer with uneven and fissured edges, in which the os uteri could not be distinguished. Nevertheless, after seven hours' labour, a fully developed child was born. The mother recovered well, and lived five months afterwards. Other cases might be quoted (21, 31), showing the same thing, that in disease affecting the whole os uteri, labour may be quick and easy. The converse proposition is also true, that a cancerous tumour may seriously impede labour, even though a part of the os be healthy. Thus, in a case reported by Arnott (3), the posterior third of the os uteri was thin, soft, and dilatable, but the labour lasted two days and a half; and in a case recorded by Boivin and Dugés (1) the posterior lip of the os is said to have been supple, but the labour lasted several days. Out of the 51 cases delivered by the natural efforts alone, in 15 the disease is said to have been confined to a part of the os. Of these, in 2 the labour was over in less than 24 hours; in 2 it lasted between 24 and 48 hours; in 2, 60 hours;

in one 4 days, and in one several days. In 13 the whole circumference was affected. Of these in 5 the labour was over in less than 24 hours; in 2 it lasted between 24 and 48 hours, and in one more than 48 hours. I think these facts show, that the mere linear extent of the cancer round the os, is not by itself a criterion from which the amount of difficulty that will attend the labour can be predicted. What the criteria are will be considered further on.

Before considering the groups of cases in detail, it will be convenient to get some general facts from them as a whole. The first point I propose so to examine, is *the cause of death* after delivery.

There are 40 cases in which death followed within a month after delivery. Of these, in one (77) death is said to have taken place by simplo collapse, 29 hours after delivery. Two others seemed to die in the same manner, one (74) 24, the other (61) $2\frac{1}{2}$ hours after delivery, but in them peritonitis was found, which was judged to have been present before the commencement of labour. Three died from post-partum hæmorrhage, in one case (69) it is not stated when; in the others, one day (78) and 6 days (66) respectively, after delivery. Two apparently died simply from exhaustion, one (81) 13, and the other (75) 14 days, after delivery; and another (63) died in 4 days from exhaustion, the result of incessant vomiting. Four died from peritonitis, in one case (94) one day, in another (99) 4 days, and in two (62, 92) 5 days, after delivery; in one of the latter (92) bronchitis and albuminuria were present before labour. Three of these cases were delivered by craniotomy. One patient (76) died from gangrene of the cancerous tissue and pyæmia, 13 days after delivery. In one case (82) the causo of death is vaguely described as "acute puerperal fever," which carried off tho patient in 4 days. In one (96) delivered by craniotomy, gangrene of the cancerous tissuo was found, tho patient had survived delivery 8 days. One patient (86) died $4\frac{1}{2}$ days after labour, and empyema and gangreno of lung were found post-mortem, but no condition of the pelvic organs

was discovered to which this could be attributed. In the remaining 23, the immediate cause of death is not stated. In one it took place half an hour after delivery; in another within a day; in 3 within 3 days; in 2 within a week; in 3 others within a fortnight; in 2 during, and in one at the end of, the third week. In the other cases the period at which death took place is only denoted by the expressions "immediately" (one case), "not long" (one case), "soon" (3 cases), "a few days" (one case). In the remaining 4 it is merely recorded that the mother died, without any details as to when or how.

Scanzoni says that patients with this disease, as a rule, suffer after delivery from a peculiarly malignant form of puerperal fever.[1] The facts here given do not show that there is any form of puerperal disease special to cancer. That cancer of the uterus often causes peritonitis, even independent of pregnancy, has been long known. But there is no evidence that peritonitis from cancer has about it anything especially malignant.

The next point is, the *duration of life after delivery* in those cases which survived the immediate risks of labour. It has been said that the violence to which the cancer must be subjected, makes it go on rapidly to a fatal issue, and, therefore, it is well to take a general survey of the facts bearing on this point. In considering the figures which follow, we must bear in mind, that all these were cases in which the cancer, at the time of labour, was advanced enough for its nature to be quite indubitable.

It is found that 2 lived a month only (in one craniotomy had been necessary, and the other was complicated with colotomy), one 40 days (complicated with erysipelas), two 6 weeks, one 9 weeks, one more than 2 months, three survived 3 months, and two more than 3 months, three 4 months, two 5 months, two more than 5 months, in two the period is vaguely stated as "a few months," and in three the expression is "some months," three lived 6 months, and one more than 6 months, two sur-

[1] Op. cit., p. 468.

vived 8 months, and one 10½ months, one lived a year, and two, more than a year, one 14 months, two more than 2 years, and one more than 3 years. In one case the patient became pregnant 3 times, and in two cases, twice, while suffering from the cancer. It should be explained, that where the duration of life is given in the words "more than" such a period, it means, not that death took place soon after that date, but that the course of the case was only observed for that length of time; it may have been that the patient survived far beyond the period mentioned. When we remember also, that in cases in which death took place soon, the occurrence would be more likely to come to the knowledge of the medical attendant, than if it had happened at a more remote period; and, therefore, that those cases in which the length of survival is not stated, probably contain an undue proportion of those who lived a long time afterwards; I think it will be evident, that if the quoted cases erroneously represent the average duration of life in the class of patients in question, they do so, by understating it. I think it probable that they do understate it. These facts do not seem to me to support the belief in question.

Coming now to the process of labour itself, it is important to ascertain, *in what way, when left to nature, is the hindrance to delivery formed by the cancerous cervix, overcome?* In 7 cases (2, 6, 7, 8, 61, 62, and 179) spontaneous tearing of the cervix uteri took place. In three others (9, 19, and 20) the account given is, that while dilatation of the os was going on slowly, and was yet insufficient to allow the passage of the fœtus, the obstacle seemed suddenly to give way, and birth quickly took place; but fissures in the os were either not looked for or not noticed. It would seem probable that in these cases also, the sudden cessation of resistance was due to laceration of the opposing part. In 9 cases (3, 4, 17, 23, 25, 27, 72, 172, 174) the os is said to have dilated, no mention being made of any fissuring, and in one of them

(3) it is expressly stated that no laceration could be discovered. In some of them, however, the disease only affected a part of the cervix uteri, and the dilatation took place at the expense of the healthy segment. In two cases (1 and 176), in which the disease formed a circumscribed tumour, the healthy part of the cervix dilated, and the diseased mass was pushed aside, and compressed between the head and the pelvic wall. In one (16) the disease formed a large cauliflower excrescence, which filled the whole vagina, and obstructed the passage of fæces and urine. As the head came down, this was forced out of the vulva, and after the child had passed, it again returned into the vagina. In 2 cases (170, 171) the disease, or a large part of it, was altogether detached. In Meigs' case (170) the whole mass, forming two fifths of the circumference of the os, came away in the hand of the medical attendant. In Lever's case (171) a very large piece of the diseased mass was torn away, and forced before the head of the child, a chasm being left so large that the hand might readily have passed into the uterus. Of the remaining cases in which labour was terminated by natural efforts, no accounts of the mode in which it was accomplished are given.

The facts given clearly show that, in cases in which dilatation of the os uteri will not take place, nature's mode of surmounting the difficulty is by the formation of fissures in the os uteri, and these fissures may run in such a direction as to entirely separate a part of the disease.

As to the period at which such fissuring takes place, in two it was after 12 hours' labour, in one after 30 hours, in four after 2 days, and in one after 4 days' labour; in the others the time of its occurrence is not recorded. I think it may, therefore, be said that this tearing does not, as a rule, take place readily, but only after the cervix has been subjected to prolonged strain.

Out of the 12 cases in which laceration thus took place, in one the termination is not recorded. In 8, the fissuring was not accompanied by hæmorrhage or any other

bad symptom. In one patient (61) considerable bleeding accompanied the tear, and the patient died in collapse two and a half hours afterwards; but on post-mortem examination peritonitis was found, which evidently had been present before the laceration. In another (62), no bad symptoms immediately followed the rent, which, indeed, appears not to have been perceived at the time; but the patient died from peritonitis five days afterwards. In Meigs case, although there was much hæmorrhage in the early part of labour, yet no great increase of bleeding followed the separation of the tumour. The patient died twenty-four hours afterwards, apparently from shock. In Lever's case, the patient lived six months afterwards. I think, therefore, that looking at these cases, and comparing them with the other cases, we may further say, that the formation of such fissures does not augment the risk to the mother; and in so far as it expedites delivery, its occurrence must be beneficial both to mother and child.

The cases in which delivery was aided by *forceps*, do not call for much separate comment, although they of course need to be divided from those in which the labour was left entirely to nature. The only function of the instrument in these cases, is to supplement insufficient uterine action, and so hasten delivery. The diseased tissues must dilate or tear about as much to allow a head to be pulled through by the forceps, as to be driven through by natural efforts. The process is more sudden, but in other respects the same. It will be conceded, therefore, I think, that the forceps has no peculiar appropriateness in this class of cases; that a case of the kind which can be terminated successfully with forceps, may, if the pains are strong enough, be delivered without them.

Examining these 9 cases, we find that in one (76) difficulty was anticipated from the beginning; the first stage of labour was assisted by water dilating bags, and the delivery was finished with forceps. This patient died from sloughing and pyæmia. In 4 cases traction with the instrument was employed to dilate the os; in 3 of them

(36, 37, 74), because uterine action was deficient, in the other (39) because pains were ineffectual, though violent. In 3 (38, 75, 77) the forceps seem to have been applied after the cancerous os had been passed. The cases do not show a greater risk attending their earlier application. They include cases (36, 37, 39), which prove, that even in cancer of the cervix so extensive and hard, that after long continued uterine action its dilatation does not take place, the head may be forcibly drawn through with forceps, and the patient may recover.

In 3 of the cases delivered with forceps, laceratiou of the cervix took place. One (37) recovered; one (74) died 24 hours afterwards from peritonitis, shown by the post-mortem appearances to have been present before delivery; and one (75) from exhaustion, 14 days afterwards. In none is there any account of hæmorrhage following the lacerations.

The cases delivered by *turning* are 14 in number. Of these 6 recovered, 8 died during the puerperal month. In cases of transverse presentation of course the only question is, whether, if the position of the child be altered, delivery can take place *per vias naturales*. If this question be answered in the affirmative, the operation of turning becomes one not of choice, but almost of necessity. Version may also be thought of as an alternative to forceps, in cases where it is desirable to accelerate labour. Goodell, considering the relative advantages of forceps and turning in pelves contractcd in the conjugate diameter, and in pelves small in all dimensions, argues that in the round, *i.e.* generally small pelvis, the forceps is more suitable than turning. In the case under present consideration, mechanical conditions are of minor importance; nevertheless, looking at the question mechanically, it seems to me that Goodell's arguments here apply; and that if it be necessary to interfere with the object of accelerating delivery, forceps will, in cases where the obstacle consists of the rigid ring of a cancerous os, be more suitable than turning. But I think more important considerations are, that if the ope-

ration of turning should present any difficulty, prolonged manipulation may be necessary, and possibly the hand may have to be forced through the cancerous os; and that, therefore, the operation itself may involve considerable additional violence to the diseased parts. It is probable that by forcing of the hand through the os uteri, and subsequent dragging through of the child, greater injury will be inflicted than by steady traction with forceps. On both mechanical and surgical grounds, the forceps seem to me, in such cases, the preferable means of expediting delivery. This is illustrated by one case (79), (a transverse presentation), in which the uterus was so extensively torn, in attempts to turn, that loops of intestine came down. In another case (41) it is recorded, that as the head passed, the cervix was torn slightly in several places, but no bad symptoms followed. In another case (85), which I have quoted from Cohnstein, it is said that rupture of the uterus took place; but I have not been able to find any details to show what is meant by this, whether merely laceration of the cervix or a rent opening into the abdomen.

Out of the 14 cases, in 6 turning had to be performed on account of transverse presentations; in the others, either it was resorted to simply to accelerate labour, or the reason is not stated.

Comparing the two operations of forceps and turning, with regard to the fate of the child, we find that of the 9 forceps cases, 5 children were born alive, 4 of them being premature; 3 were dead, all of them decomposing, the fate of the remaining one is not stated. Of the 14 delivered by turning, 4 were living, one of them premature; 6 were dead, two of them decomposing, and the result as to the other 4 is not stated, So far as they go, these results show that the forceps offer a better prospect for the child, which is what we should have expected, knowing the greater risk to the infant that ensues whenever the pelvic extremity comes first, a risk not in most cases of this kind balanced by a corresponding advantage.

In 14 cases *incisions* were made into the cancerous

cervix. Of these, 11 recovered, and 3 died. Of the 3 which died, in one (86) the making of the incisions was not successful in procuring rapid delivery, the child not being born till $2\frac{1}{2}$ days afterwards. But no pain or hæmorrhage followed, and there were no appearances, although they were looked for, to show that the incisions had anything to do with her death, which took place $4\frac{1}{2}$ days after delivery. In another case the incisions were not made till the patient, after 3 days labour, was extremely weak and exhausted; they were, however, most effectual in procuring the desired end, for delivery was completed by 5 more pains. Of the other fatal case, no details are given. Of the 11 cases in which the event was favourable, of 3 (55, 56, 57) we have no detail, and in one (54) the cancer was confined to the recto-vaginal septum. In the other 7 the incisions were made because the labour had lasted long, (in the cases where the time is mentioned, 2 or 3 days), either with very slight, or without any dilatation of the os uteri; details being given in 5 out of the 7 (47, 50, 51, 52, 53), which show, that there was sufficient disease of the cervix to account for this obstruction. In 4 of them (47, 50, 51, 52) it is expressly stated that either none, or very slight hæmorrhage followed. In 10 out of the 11 delivery was finished with forceps, in the other by traction on a presenting foot. It has been said that "where incisions are necessary in cases of cancer, it is found that afterwards the disease makes much more rapid progress than before."[1] This is a statement, like those concerning the progress of cancer during pregnancy, exceedingly difficult either to prove or to disprove; for, although we know the average duration of cancer, yet individual cases, not complicated with pregnancy, depart so widely from the average, that a very large number would be needed to test any point of this kind. But I have before given evidence in support of the view, that the removal of the developmental stimulus is followed by a remission in the symptoms, and I see no reason for supposing that incisions should be followed by worse results than the bruising and tearing

[1] Meadows, 'Manual of Midwifery,' 3rd edition, p. 319.

which take place if incisions are not made. As to duration of life, the cases treated by incisions compare well with those treated in other ways. One case died from erysipelas, 40 days after delivery; one lived 3 months; another a time not stated exactly, but more than 3 months; another, "a few months," one 4 months, one 6 months, one 10½ months, and one 2 years. When we bear in mind the extent of the disease the presence of so much resistance to delivery implies, there seems no reason for thinking that in these cases the progress of the disease was accelerated.

Putting together the cases in which incisions were made, with the 17 cases in which laceration spontaneously took place, we have 31 cases, in which the cancerous cervix was either cut or torn. In only one did considerable hæmorrhage take place, and in this case the death was not due solely to the laceration. In one, the rent extended too far, opening the peritoneal cavity; an accident that might possibly have been prevented by the united yielding of several small incisions, had they been made. Seven others died, but there was nothing to specially connect the death with the cervical wounds. Of one case, the result is not mentioned. There are no cases in which any evil result directly followed from incisions, and but two in which immediate ill consequences followed lacerations; and in one of these, those consequences seem as if they might have been prevented by incisions. Remote ill effects seem to me wholly unproved, and *à priori* improbable. I think that clinical evidence supports the assertion, that the special dangers attending laceration of the cancerous cervix during labour, are very slight, and those attending incisions still less; that their effect is beneficial, for they aid dilatation of the os, and thus expedite delivery, and diminish the amount of the bruising and duration of compression of the cancerous tissue; in each of these ways adding to the patient's chance of recovery. And if they expedite delivery, it is manifest that they lessen the risk to the child, if it be alive.

A point as to which the facts are few, but which seems to me important, relates to the use of water bags in these cases. In 4 cases (76, 89, 100, 163), they were used to dilate the cervix. Of these, two died, and the two which recovered suffered from severe pyrexia subsequently to delivery. It seems to me that in these cases, incisions probably do less harm than the prolonged pressure of the india rubber bag. These cases, so far as they go, tend to support this view. It may possibly be sometimes advantageous to use both means, to dilate with the bags, and aid expansion by incisions.

In 12 cases delivery was effected by *craniotomy*. Of these, three only survived the puerperal month, and in one of these, sloughing of part of the growth followed. An examination of the details shows that in most of these the operation was performed under very unfavourable circumstances. Some patients were exhausted by prolonged labour; in others the diseased parts had been irritated, bruised, or torn by the means previously employed, more than probably would have been the case had the earlier part of labour proceeded in a natural manner; and in some the length of the operation, or the smallness of the aperture through which the head had to be dragged, bear testimony to the difficulty of the operation, and therefore, inferentially, to the great amount of local violence which must have been unavoidable. Thus in 3 of them, turning had been previously performed, and in one of these, the subsequent traction detached the trunk, so that the retained head was left for separate extraction. In two, Barnes's bags had been used to accelerate the first stage. In one case, incisions had been made without effect, and in another, extraction was impossible until incisions had been made. In one, the operation of perforation and extraction lasted four and a half hours, in another, three hours, in another, two and a half hours.

Two remarkable cases, which, as embryotomy was performed, are classed here, will be subsequently referred to.

Cæsarean section was performed in 12 cases. (In one

of them (103), however, the cancerous nature of the disease is very doubtful; for the mass which had obstructed delivery subsequently disappeared[1]). Of these 12, 8 died, 4 recovered (one of them the doubtful case). Of the children, 2 were dead, one of them being decomposing, and another, though extracted alive, died immediately afterwards. In 5 cases the pregnancy had advanced to term, in 4 it had reached 8 months, in 1 between 6 and 7 months, and in 2 its duration is not stated. The 3 indubitable and successful cases had all reached term. In 2 cases the operation was performed before labour had commenced, one of these was successful; in 8, not till after labour had set in; in 2, information is not given as to this point. The cause of death was, in 3 cases (106, 108, 112) peritonitis; in 2 (110, 111) loosening of the uterine sutures, and consequent gaping of the uterine wound. In one (107) it was exhaustion from excessive vomiting, in another (108), gangrene of the cancerous tissue. The duration of life in the successful cases is not stated. The marked relief to the symptoms which followed in two of them has already been commented on.

In 11 cases *rupture of the uterus* took place: all of them died. In two of them (113, 120) the rupture was incomplete, and in another (117), although it is said that symptoms of rupture of uterus were present, yet it is not clear that anything more than laceration of the cervix took place.

In 6 cases the rupture took place after vigorous and prolonged uterine action, in 1, after the labour had lasted 12 hours, in another after 36 hours, in another after 2 days, in one after 3 days, and in one the length of labour is stated as "some days;" in the other the pains are described as "strong." In one case, however (123), the rupture took place with the fourth pain. One patient is merely said to have been in labour. In one a fibroid was discovered post mortem.

These cases, like others which have been put on record,

[1] See Barnes, op. cit., p. 830.

show that rupture of the uterus does not invariably result from insuperable obstruction to delivery, causing the uterine fibre to give way from the violence of its own ineffective contractions, for in one of them it followed the fourth pain, and in 3 of them the child was extracted *per vias naturales* after the rupture; but of these, in one the presentation was transverse, and in the others it is not stated.

There are 13 cases in which the patients *died undelivered*. Of these, four died without any signs of labour; one (135) suddenly, 6 months pregnant, the cause not being stated; one (134) from diarrhœa and hectic, 5 months pregnant; one (131) from hæmorrhage and vomiting, and one (132) from peritonitis. Scanzoni mentions another case[1] (the details of which are so scanty that I have not put it in the table), his patient died from hæmorrhage, but whether in labour or not he does not say. There are two cases in which abortive attempts at labour came on; in one (130), they came on more than once, the patient dying of peritonitis; in the other (127) they lasted half a day, the patient died 3 weeks afterwards. In six cases labour came on vigorously, in one (129) the os had dilated to the size of half-a-crown when the patient succumbed; in one (124) no dilatation took place, and the patient died from peritonitis and metritis 7 days after the escape of the liq. amnii; in one (133) the uterus seemed, without distinct pains, to be in a state of tonic contraction; there was no dilatation, and Cæsarean section was intended, but the patient was so exhausted from hæmorrhages and discharges, that the idea of it had to be given up. In one (128) perforation was performed, but after many fruitless efforts at extracting the child the patient died. In another (126) the pains continued, on and off, for a month, the uterus being in a state of stony hardness from chronic contraction; there was at last a little dilatation, but before delivery could be accomplished the patient died. One patient (136) died 20 days after the

[1] 'Lehrbuch der Geburtshilfe,' 2te aufil., s. 467.

commencement of labour pains. Lastly, there is the extraordinary case of Menzies (125) in which the child was retained 17 months, irregular pains like those of labour continuing with varying severity for 7 months before death. With this case may be associated the two cases referred to in the craniotomy group; one case (90) given by Menzies, in which embryotomy was performed, and the fœtus expelled in fragments during the next 3 months, and one (96) by Depaul, in which pains came on at term, and lasted about a month, the os then dilated to about the size of a five franc piece, and the child was extracted by disarticulation, the pregnancy being supposed to have reached 10½ to 11 months. The mother died from peritonitis and gangrene.

In those cases in which death took place after prolonged labour, and in those cases of rupture of uterus in which it followed the same antecedent, I think we may take it that we have those cases in which the obstruction caused by the cancer reached the degree of being insurmountable, and therefore by studying them, we may get some information as to what are the characters of the cancerous cervix which give rise to the greatest amount of obstruction. Of the 6 cases of ruptured uterus in which this accident happened after protracted labour, in three it is not clear that the rupture was due to great obstruction at the os. Of the other three, in one (119) the condition is thus described by Oldham: "The disease had already destroyed a considerable portion of both lips of the os uteri, leaving a hole big enough to admit two fingers; it was unusually hard and rigid, the anterior wall felt like a mass of hardened mortar." In another (120) it is said that there was "an enormous scirrhous tumour, which occupied the whole neck and lower part of body of uterus, obliterating the orifice; the borders of the os were extremely hard." In the other (121) there was "a tumour which almost entirely filled up the vagina." Of those which died undelivered after prolonged ineffectual labour, there are 7 cases. In two of them (124, 125) the epithet used

to describe the condition of the os is, "as hard as cartilage"—"cartilaginous." In another (126) the cervix is described as of "woody hardness." In one (129), Ramsbotham says the cervix was "exceedingly indurated." Another (133) Oldham mentions was "particularly hard and unyielding." One case was one of cancer of the vagina, forming a considerable tumour; and the remaining one, the disease formed a large fleshy tumour, the largest which Denman had ever seen, it was so large that there was no possibility of the head passing it.

We see that in these cases either unusual hardness is mentioned or a very large tumour is spoken of. As we have no means of expressing quantitatively the degree of hardness, or even of measuring the extent and size of cancerous disease of the os, it is not possible to be very precise on this point. We have seen that the linear extent of the disease around the os is not a sufficient guide to the probable difficulty of the labour, for in disease affecting the whole circumference of the os delivery may be easy. We now see that unusual hardness of the growth, or unusual size of the tumour formed by it, are the conditions under which the hindrance to delivery becomes insurmountable; and we should therefore think that in trying to forecast the probable difficulty of delivery, these are the points to which attention should be paid. The hardness would seem the more important, for it may be possible to remove a tumour.

Twenty cases ended in *abortion:* in two of them it was artificially induced. As to the time of the abortion, in one it was at two months, in one between two and three months, in four at three months, in two between three and four months, in four at four months, in two between four and five months, and in two at five months; in the remaining four the period of pregnancy is not stated.

In six of the cases the miscarriage was accompanied with severe hæmorrhage, but in only two of them did it appear that the hæmorrhage directly accelerated death. As to the length of survival after the abortion, one patient

is said to have died "shortly after" this event, one four or five days afterwards, one lived some weeks, one seven weeks, and one eight weeks afterwards, one survived three months, two four months, one five months, one more than six months, one seven months, one ten months, one a year, and one two years. One of the patients aborted three times, and one twice, while suffering from uterine cancer.

Taking these cases as they are they show that abortion is not attended with so much risk to the maternal life as is labour at term. But for reasons previously given I am inclined to think that Hachmann's supposition may be true, and that these twenty cases probably include an exceptional proportion of cases accompanied with remarkable features. It is to be further observed that if (as I have endeavoured to show) the cancerous cachexia has the effect of bringing about intra-uterine death and premature expulsion of the ovum, we should expect this tendency to be strongest in those cases in which the cachexia is the most advanced, and therefore that abortion would be most likely to occur in the worst cases. Judging by the analogy of other diseases we should think that abortion may in such be more correctly called a precursor than a cause of death. Those cases in which death took place very soon after abortion rather bear out this view (147, 152).

It is to be noted that in the two cases (138, 151) in which abortion was induced, the hæmorrhage was not considerable, and the relief to symptoms was marked.

There are *ten cases in which the diseased part was removed during pregnancy.* In one case (163) it was done at the end of the first month of pregnancy, the patient went to the full term, but the disease had returned before delivery. In one case (165) it was removed in the second month of pregnancy; this patient went to term and had an easy labour. In four the operation was performed about the fifth month; one of these (158) aborted the next day, one (166) went to within five or six weeks of term, and the other two (160, 162, in one of which (162) Douglas's pouch

was opened at the time of the operation) went to term, all recovered well. In one case (161) the tumour was removed at the sixth month, Douglas's pouch being opened; this patient was delivered of a dead child eleven days afterwards. In one case (159) the operation was done at the seventh month, labour came on a week afterwards. In one case (164) it was performed at the eighth month, a dead child was born eight days afterwards. The remaining patient (157) had reached nearly the end of pregnancy, labour came on five days after the removal of the growth.

It thus appears that in only one out of ten cases was the operation immediately followed by abortion, and that five out of the ten were delivered at full term.

There is, therefore, evidence that the diseased part may be removed during pregnancy without any great risk of inducing abortion. As to the risk of hæmorrhage, in none is any considerable loss of blood recorded, and in five it is distinctly stated that there was no great hæmorrhage. In two, however, the actual cautery was used to check bleeding, and in one case the galvanic cautery was the instrument with which the operation was performed. I think that from these facts it may be further stated that the measure in question may be accomplished without much risk of dangerous hæmorrhage, the means at our disposal being, as a rule, adequate to prevent great loss of blood. It will be noticed that in two cases Douglas's pouch was opened, but both patients recovered. This immunity, I think, can hardly indicate the rule, though it deserves notice. As to the result of the operation with respect to progress of the disease, we have seen that in only one had the disease returned before delivery. The others all had quick and easy labours. In one case (158), five months afterwards the disease had not returned. In four the disease did return after delivery; in the other cases the further history was not followed up, and unfortunately the termination of the case is not recorded in any of them. (Among the cases which died undelivered will be found another case (134), but as the disease had returned within

a month the removal would seem to have been incomplete). I think we may, therefore, conclude that removal of the diseased part during pregnancy is not much, if at all, more dangerous than in the non-pregnant condition; and that if the disease be thoroughly removed, it may fairly be expected that a sufficient interval will elapse before its return, or before the fresh disease has become extensive, to allow of an easy delivery.

In three cases the diseased part was removed at the time of labour, in one with the galvanic cautery (167), in the other two with scissors. In the two latter cases the operation greatly facilitated labour; in one (168) the os uteri, which before the operation would only admit two fingers, immediately afterwards expanded uniformly; and in the other (169), by the removal of a cauliflower-like growth which filled the vagina, room was gained to rectify a transverse presentation. In neither was there any hæmorrhage. In the case in which the galvanic cautery was used only a part of the growth was removed, and the obstacle to delivery remained nearly as great as before. Incisions were made, and forceps applied. The child was saved, but the mother died from peritonitis.

The lesson of these cases would seem to be that part of the cervix may be safely removed during labour, and that if the disease be tolerably circumscribed, removal of the diseased part will facilitate labour; but that removal of a part of the disease is not of much use.

The practical question which, by collecting and comparing these cases, I have endeavoured to aid in answering, is this; *what is best to be done in cases of pregnancy complicated with malignant disease?* The reply given will, of course, depend partly upon what we regard as the end to be obtained—in other words, upon whether we consider the life of the mother, or that of the child, to be the more valuable. This last question is one not of obstetric science but of ethics, and as this paper is not upon the subject of medical ethics, I shall not enter upon it, but will merely say that I accept and think right that which

has long been the rule of British midwifery, viz. that the life of the mother is always to be preferred to that of the child. The question, then, to which I propose to offer an answer is this: what mode of treatment is best for the mother? Our object is, of course, to save both if we can. The first thing that we should ascertain seems to me to be, *can the diseased part be removed?* I have adduced evidence to show that the risk in removing a diseased cervix is little, if at all, greater than in the unimpregnated state; and it seems to me that the arguments in favour of removing, whenever possible, the local disease, apply with greater force when the patient is pregnant than at any other time, for, as has been shown, if the malady do return within a short time, the interval may yet be enough to allow of a safe delivery; and even if its recurrence should take place before the end of pregnancy, the diseased parts will probably not form an obstruction of the same magnitude and resisting power as would have been the case had it been allowed to grow unchecked; and that, therefore, even if the operation do not ultimately much prolong the mother's life, yet it may save her from much peril and suffering in the process of labour. I think, therefore, that if it be possible to remove the diseased part, it should be done without delay.

But the class of cases in which this is possible, contains the simplest and least formidable ones. We may have cases in which, at an early period of pregnancy, the cancer is so advanced as to render its complete removal impossible. The question then arises, *is it desirable to interrupt the pregnancy?* This is a measure mentioned with approval by Dr. West,[1] who speaks of the practice as sound, and by Scanzoni,[2] and the late Dr. F. W. Mackenzie, in the first paper read before this society, recommended its adoption, and narrated a case in which it was carried out.

I have given reasons for thinking that pregnancy accelerates the growth of the disease, and if so, its pro-

[1] Op. cit., p. 406. [2] Op. cit., s. 371.

gress may be expected to be retarded, and therefore, the patient benefited, by the removal of this stimulus. Again, in Dr. West's words, "the dangers attending miscarriage are not to be put in comparison with those that accompany labour at or near the full period of pregnancy." It needs no showing, that a degree of dilatation insufficient to permit the birth of a viable child, may yet allow the passage of an ovum of 5 months or less. And if, at an early period of pregnancy, the cancer be so advanced that its removal is impossible, it will probably at the end of gestation, if the patient live till then, have reached a sufficient size to make labour very difficult and dangerous. The special danger of abortion in these cases would seem to be from hæmorrhage. This hæmorrhage may either come from the cancer itself, or from vessels laid open by the separation of some part of the chorion or placenta. If from the cancer, the cautery may be used (as in the second of the two cases with which this paper commences) to destroy the new growth which bleeds, and at the same time open up a free cervical canal. If it be from detachment of chorion or placenta, we have in the tent a means of at once effectually arresting hæmorrhage by plugging (at least in cases where the pregnancy is early), and aiding dilatation. I believe therefore, that by the use of the means which we have at our command, excessive hæmorrhage attending abortion may be greatly controlled.

Judging from the analogy of labour, I should doubt if the process of abortion leads to increase of hæmorrhage from the cancer. When the hæmorrhage has been (as in my case) continuous throughout pregnancy, I think it may be inferred that it comes from the new growth. Where this hæmorrhage becomes excessive, and abortion follows, I should think the hæmorrhage more probably a cause than an effect of the abortion.

For the reasons stated, I think that in cases where, at an early period of pregnancy, the cancer is so advanced as to make its removal impossible, the artificial induction of abortion offers the best chance for the mother.

Dr. F. W. Mackenzie, in his paper on the subject, deemed it necessary to defend the morality of his practice. I shall not do that, because that question is one of an entirely different nature to those which I am discussing. If it be intrinsically wrong to induce abortion, no amount of success can justify it; but if it be right to do it when maternal life can be saved or prolonged thereby, then it becomes simply a question of results. I assume, what I believe is now generally admitted in this country, that it is right and proper to cut short pregnancy if by doing so we can save or prolong maternal life; and for the reasons given, I think that in the case under consideration we can prolong life by adopting this measure.

But we may not in all instances be called to a case of the kind until pregnancy has advanced to the sixth or seventh month. If so, *is any benefit to be derived from the induction of premature labour?* I think there is, although not so much as from an earlier termination of the pregnancy. The child will be smaller, hence dilatation of the os need not be so complete, and the bruising and tearing of the parts will be less. The cancer also will be less advanced, and its obstructing power will be probably less than at a later period; and in this step we imitate nature, for we have seen that in a large proportion of cases labour spontaneously comes on prematurely. And we may possibly, by the early induction of labour, deliver alive a child which would otherwise have died in utero, a possibility which we may put against the other possibility resulting from the feeble resisting power to injurious influences possessed by an immature infant.

The next question is, the patient being in labour, *what is the best mode of managing delivery?*

In stating those conclusions as to the management of labour to which the evidence from the cases I have collected seems to me to point, I shall confine myself strictly to the local condition. In actual practice many other factors come into account. We must judge each case by itself, and take all the facts into consideration; but I am

here only dealing with the conditions which are peculiar to labour complicated with cancer.

The obstruction from cancer of the uterus is, of course, in the first stage of labour: the os does not dilate. If dilatation can be accomplished, there is no further hindrance. If the cancer be confined to a small part of the os, the sound part may dilate readily, and no interference be needed; but if the disease affect the whole circumference of the os, dilatation may be slow, and will probably be completed by spontaneous tearing. This tearing but seldom adds to the risk, it is conservative. One of its dangers is that it may extend too far; a single rent may extend to the peritoneum. This is not so likely to happen where the os fissures in several places. But there are also cases in which dilatation will not take place, and, therefore, delivery by the natural passages is impossible; and in which, unless we interfere, ineffectual attempts at the expulsion of the child may continue till the patient dies from exhaustion, undelivered; or rupture of the uterus may take place. These latter cases are characterised either by extreme and unusual hardness of the diseased cervix, or by the cancer taking the form of a voluminous tumour. These, then, are the conditions with which we have to deal. It appears to me that the first question, in labour as in the pregnant condition, should be whether we can remove the disease. If it be so circumscribed that removal of the whole is practicable, the few facts we have show that it may be done with tolerable safety, and there can be little doubt about its advantage when possible. But even if it be impossible to remove the whole disease, it may be that a part of it forms a projecting tumour more or less pedunculated. If so, the removal of such a projecting tumour will facilitate delivery, and will probably diminish the patient's symptoms, and, therefore, it should be done when feasible. There seems to be little risk of hæmorrhage.

But this measure is not always, indeed is seldom, practicable. It is of no use to cut off a little bit, and leave the

greater part behind. What, then, should be done in cases in which it is not possible to remove any considerable part of the disease?

As has been shown, the os may dilate well, and delivery be quickly accomplished; in such cases no interference is needed. But taking the cases in which the dilatation is so slow as to call for some help, they fall into two classes: those in which with assistance delivery of a living child is possible, and those in which it is not, and the problem is to differentiate between them.

If we find that the disease does not form a great tumour, and is not particularly hard, and that as the pains become frequent and strong the os gradually, though slowly, begins to dilate, then, I think, our best plan is to assist Nature by imitating her process, and incise in several places the diseased and rigid os. These incisions do not add to the danger at the time; there is no evidence that they do, as has been stated (erroneously, I believe), lead to increased growth of the disease afterwards; and by facilitating delivery they do save the patient from the danger and suffering consequent upon protracted labour. For reasons already given, I think incisions as a rule preferable in these cases to the pressure of water dilating bags. If, aided by our incisions, the os uteri opens, but yet the force of the uterine contractions appears inadequate to drive the child through, then I think we should seize the head with forceps, and by traction accomplish delivery. I have already given reasons for thinking forceps generally preferable to turning, for the purpose of accelerating the labour. But there yet remain cases in which delivery of a living child cannot take place, and the alternative lies between craniotomy and Cæsarean section, and some, in which there is no alternative, but the Cæsarean operation must be performed.

We may have a case in which the cancer forms a tumour so large that the head cannot pass it, and so hard and fixed, that no yielding whatever can take place; it may even be difficult to find the os. In such a case most will

agree as to the necessity of Cæsarean section. But there are other cases which are not so remarkable for the size of the tumour, but in which the os will not dilate even after incisions have been made, and these are cases either for craniotomy or Cæsarean section. So far as I can see there is nothing except the hardness (a quality which can only be estimated roughly by the finger) in which a difference can be pointed out between these cases and others in which quick dilatation has taken place, and there is no way of being sure that such a cervix will not yield except by making incisions and watching the result. If, after incisions have been made, the pains are strong and frequent, and yet no yielding takes place, then it is evident that we must resort either to craniotomy or to Cæsarean section. I have only been able to find twelve cases of delivery by craniotomy in cases of cancer uteri, but of these the rate of maternal mortality was 75 per cent. The mortality of Cæsarean section in England is 84 per cent. (of the cases which I have collected in which it was performed for cancer, 72·7 per cent.). The data are unfortunately scanty, but they show a very slight difference between the results of the two methods, and when we consider that those who recovered after Cæsarean section did so with far less injury to the diseased parts, and that their local condition was therefore much better than would have been the case after the violence unavoidable with craniotomy under such circumstances; I think that the risks of the two methods are so nearly equally balanced, that we may let the result to the child turn the scale, and look upon Cæsarean section as the operation to be performed when a living child at or near term cannot be born. But a much larger field has been claimed for this operation. It has been said that if any interference at all is needed to accomplish delivery, the Cæsarean section should be the means resorted to. Looking at the high mortality of Cæsarean section, at the abundant evidence there is that patients may recover well and live for months after delivery while suffering from cancer, and

looking at the very slight risk which attends incisions of the cancerous cervix; I think that Cæsarean section ought not to be done until we are sure that delivery of a living child *per vias naturales* is impossible. The argument that Cæsarean section may hereafter become less dangerous, I think does not apply until it has become less dangerous. In advising our patients we have to take into consideration tho means which we have now at our disposal, and not those which we may have horeafter.

I will conclude by stating as briefly as possibly the points which demand attention in this communication. Examination of the recorded cases leads to the following conclusions as to their clinical history:

1. That whatever influence cancer of the utorus may have upon conception, is adverse to its occurrenco.

2. That cancer of the uterus tends to produce tho intra-uterino death, and premature expulsion of the fœtus.

3. That the growth of cancer of the uterus is, as a rule, accelerated during pregnancy.

4. That with cancerous disease affecting the wholo circumference of the os uteri, labour may be quick and easy, and the patient may recover well, and live for months afterwards.

5. That when delivery under such conditions is accomplished by natural efforts, expansion of the cervix usually takes place by fissuring.

6. That this fissuring does not usually augment the risk to the mother.

7. That imitation of this natural process, by making incisions, neither increases the danger at the time, nor accelerates the progress of the disease subsequently, and that it often greatly facilitates delivery.

8. That the cases in which the cancer forms a tumour of great size or hardness, are the ones in which delivery by natural efforts will not take place.

9. That where the above characters are absent, no definite criteria can be drawn from the local conditions by

which to foretell the behaviour of the cervix uteri during labour.

10. That where delivery of a living child *per vias naturales* is impossible, such limited experience as we have shows that there is but little difference, as to risk to tho mother, between craniotomy and Cæsarean section.

From these data, it appears to me that the following conclusions as to practice follow.

1. That where it is possible to remove the disease, either during pregnancy, or at the time of labour, it ought to be done.

2. That where this cannot be done, the safety of the mother is best consulted by bringing the pregnancy to an end as soon as possible.

3. That when labour has actually come on, expansion of the os uteri should be aided by making numerous small incisions in its circumference.

4. That, dilatation of the os uteri being in progress, if uterine action should be deficient, and it become necessary to accelerate labour, the use of the forceps is, as a rule, better than turning.

5. That when dilatation of the cervix cannot take place, even after incisions have been made, either from rigidity or magnitude of the tumour, Cæsarean section should be performed.

A.—Cases which terminated favourably by the Natural Efforts alone.

No.	Authority.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
1	Boivin and Duges, Traite Pratique des Malad. de l'Uterus, t. ii, p. 52	36 5th pregnancy	More than 13 months	An enormous tumour in the vagina (at first taken for the fœtal head), hollow in the centre so as to admit the first two joints of the forefinger; the surface of the other part of the tumour knotty, hard, and uneven. The os uteri behind and to the left of this tumour, its posterior lip several lines thick, but supple	Natural efforts	After several days' labour the os dilated. The cervical tumour was forced down to the vulva, and as the head emerged was tightly compressed between it and the right ischium	Living	Recovered	Patient left the hospital on the 15th day. The disease progressed during a year subsequent to delivery, though not as rapidly as might have been expected. Further course not ascertained. Madame Boivin remarks on the softening of the tumour during pregnancy.
2	Martel, Archiv de Tocologie, 1877, p. 745	37 6th pregnancy	2 years	Wasting (especially rapidly during pregnancy); hæmorrhages after 3rd month of pregnancy. Upper part of vagina very thickened, forming an irregular, mammillated tumour, with projections of cancerous tissue blocking up the canal. The os uteri degenerated in its whole circumference; the an-	Natural efforts, premature at 7 months	Labour lasted 45½ hours. Pains were strong	Dead	Recovered	Patient left the hospital on the 28th day after delivery. Her general state was slightly improved, the pains better. State of cervix and vagina the same as before delivery. It was evident that the passage of the head had led to deep tearing of the degenerated tissues.

	Trans-actions, vol. xxxi, p. 42	pregnancy		enlarged, indurated, gristly; anterior lip of largest size; rugged ulceration of inner surface of both lips. Uterus fixed	month, natural efforts	able; anterior two thirds firm and unyielding. Twins: first child presented transversely; second footling. After expulsion, os was about 3 inches in diameter; no rent could be felt in it		3rd day, but no other grave symptoms	iliac region. Secondary cancerous tumours in other organs.
4	Hodge, Principles and Practice of Obstetrics, 1864, p. 519	—	—	The whole anterior semi-circumference of the neck thickened and swollen by a cancerous degeneration	Natural efforts	After a few hours the dilatation was so complete that a large infant was spontaneously delivered	Living	Lived for 4 months	Was in comparatively good health for three months, affording sufficient nourishment for her infant. The disease then increased rapidly, and at the end of four months after delivery she died.
5	Madame Lachapelle, Pratique des Accouchements, vol. iii, p. 368	30 Multi-para	—	Frequent hæmorrhages and fœtid discharges during pregnancy	Natural efforts, head presenting at term	Pains accompanied with considerable hæmorrhage. A spongy, irregular swelling of left side of os uteri (at first taken for placenta)	Living	Left hospital in good condition on 9th day	Labour lasted 2 days; cervix did not dilate, and finally gave way by three or four fissures, to left, to right, and behind.
6	Madame Lachapelle, op. cit., p. 369	Primi para	—	Margin of os uteri thickened and of scirrhous hardness	Natural efforts, head presenting at term	Termination of case not recorded	Suspended animation, but easily restored	Remained in hospital 6 days, during which no ill result appeared	Termination of case not recorded.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
7	Madame Lachapelle, op. cit., p. 370	42 12th pregnancy	4 months	Pregnancy preceded by hæmorrhage for four months. Bearing down and lancinating pains towards the end of gestation. Posterior lip of os scirrhous, divided into two lobes, continuous with one another, the larger as big as a walnut	Spontaneous: breech presentation	Labour lasted 4 days. Cervix did not dilate until 2 hours before delivery. An examination 15 days afterwards discovered a deep fissure directed backwards on each side of the tumour	Living	Free from pain after delivery, scirrhous tumour the same, os contracted 15 days afterwards	Termination not recorded.
8	Simpson, op. cit., p. 501	—	—	The whole circle of the cervix uteri seemed affected with the cancerous disease	Natural efforts, prematurely	Labour premature between 7th and 8th months. The os at last dilated and fissured sufficiently to allow a living child to pass	Living	Recovered	The disease proved fatal to the mother a few months subsequently.
9	Ramsbotham, loc. cit.	3rd pregnancy	Nearly 2 years before delivery	A previous abortion during progress of the disease. From the whole disc of the os a fungous tumour sprang, which filled a large portion of the vagina; cervix exceedingly indurated all round	Natural efforts	Labour lasted 48 hours. Os uteri dilated slowly, although pains were very strong. The head passed suddenly through os uteri, its passage being accompanied with a shriek from the mother and a rending sensation; no laceration was detected, but a minute exploration was not made	Living	At the end of a month was able to leave her room	Died 14 months after delivery.
10	Fankhauser, Schmidt's Jahrbücher	49 6th preg-	—	Hard nodules in anterior vaginal wall, and in va-	Natural efforts,	Dilatation of os slow; pains beginning to fail	Living	Left hospital on 7th day	Carcinoma was thought to have advanced when

	Corr. Bl., iv, 1, 1874)								
11	Pedelaborde, Chantreuil, op. cit., p. 28	32 6th pregnancy	More than 6 months	Leucorrhœa and hæmorrhages. Os uteri covered with cancerous nodules separated by deep fissures. Os admitted finger with ease at 7 months' pregnancy. Pregnancy not suspected	Natural efforts at 8 months	Labour lasted about 24 hours after rupture of membranes. The discharged liq. amnii was taken for urine, and pregnancy never suspected till the child was seen	Living	Recovered	Termination not recorded.
12	Benicke, op. cit., p. 347	—	—	Advanced carcinomatous degeneration of the whole lower part of the uterus and the vaginal wall, the solid infiltration being felt extending to the pelvic walls. Cæsarean section thought to be unconditionally indicated	Natural efforts, premature at about 8 months	Hardly any pains; a dead child found between her thighs	Dead	Favourable	When examined some days afterwards, a crater-shaped opening in the hard infiltration found in situation of internal os. Cancerous disease reached to meatus urinarius. Further course not stated.
13	Elias von Siebold., Jour. für Geburt, Bd. iii, p. 57, 1819	—	—	Scirrhus with pregnancy	Natural efforts, full term	Birth quite natural	Living	Recovered	The cancerous disease advanced, but she soon became pregnant again.
14	Arneth, Geburtshilfliche Praxis, 1851, p. 65	2nd pregnancy	—	On the right side of the posterior part of os uteri a cartilaginous ridge, in the neighbourhood of which were several indentations surrounded by hard tissue. The os uteri in several places was studded with granulations	Natural efforts	Labour lasted about 15 hours	Living	After a perfectly normal lying-in, patient was discharged on 8th day	Examination before patient's discharge showed that the indentations had increased in size, and the whole os uteri, with the exception of a small part to the left, studded with granulations.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
15	Cormack, London Journal of Medicine, 1851, p. 212	30 4th pregnancy	Probably some months before pregnancy	Pregnancy; some months before great menorrhagia. During pregnancy watery discharge, with slight hæmorrhage, about once a month. General health during pregnancy thought to be good. An irregular, tolerably firm, somewhat elastic mass, growing from anterior part of os uteri, obstructing upper part of vagina	Natural efforts, aided by ergot	Much hæmorrhage in early part of labour. Labour lasted 28 hours. Os uteri rigid; membranes ruptured, and ergot given	Living	Everything went well till 14th day, then alarming hæmorrhages and much local pain	70 days after labour the diseased part of uterus was excised. Much improvement followed; but in 2 months the disease returned, and 8 months after delivery the patient died from exhaustion.
16	D. D. Davis, Obstetric Medicine, p. 737 (quoted from Clark)	26	Not longer than 9 months	Profuse discharge, from the effect of which she seemed to be sinking fast; the whole pelvis filled with a cauliflower excrescence, so large as to impede the passage of fæces and urine	Natural efforts, head presenting	The tumour was expelled before os uteri could be dilated for passage of head, and before head could pass through pelvis. It receded into the vagina as soon as the child was born	Not stated	No unusual discharge followed parturition	Patient died in a state of great emaciation 6 weeks after delivery.
17	Hachmann, Siebold's Journal für Geb., &c., vol. xv, p. 626	32 multipara	Symp. began during latter half of preg.	Severe pain; no hæmorrhage; wasting and hectic. Os uteri thickened, deeply fissured, very hard, and sensitive. It admitted two fingers	Natural efforts at term	Labour lasted about 16 hours. The pains were severe, and the os dilated slowly. Not more hæmorrhage than usual followed	Living	Recovered	No bad symptons occurred during the lying-in period. She died 4 months afterwards. Autopsy forbidden.
18	Dubois, from Cohnstein	—	—	—	Natural efforts	—	Living	Recovered	—

		naucy				born. Whether any tearing took place was not noted			
20	Merriman, quoted in Lee's Clinical Midwifery, 2nd edition, p. 92	—	—	—	Natural efforts	Labour pains excruciating, and continued for a long time without producing any effect upon the os uteri; but at last it gave way suddenly, and the head passed through it	Living	Recovery	Died 6 weeks after delivery.
21	Merriman, op. cit., p. 92	—	2 years or more	Extreme pain in the back, emaciation, and extremely offensive discharges. The whole os uteri and a large part of the cervix was eaten away by ulceration	Premature at about 6 months	The fœtus and placenta passed into the world almost without pain	Living	Recovery	Was not at all benefited by delivery, but continued to live in a state of great suffering till death, 6 months afterwards.
22	Robert Lee, op. cit., p. 91	—	—	Malignant fungoid disease of the os uteri	Spontaneous at 7 months	Induction of premature labour was recommended, but refused	Dead	Recovery	Pain, discharges, and other symptoms almost entirely disappeared for several months after confinement, but they returned, and she died 8 months after delivery.
23	Lever, Organic Diseases of the Uterus, p. 219	39 10th pregnancy	—	Lancinating pains; wasting. Posterior limbus of os uteri and cervix of scirrhous hardness	At term, a small fœtus, natural efforts	Labour lasted 60 hours. Anterior segment of os uteri dilated sufficiently to allow the passage of a small fœtus	Not stated	After delivery great pain and a sensation of burning in region of tumour	Five weeks after her confinement suffered from all her previous symptoms, but in an aggravated degree. A great increase in the local disease. Termination of case not recorded.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
24	Lever, op. cit., p. 221	3rd pregnancy	—	Pains in loins; irritability of bladder	Natural efforts	Labour of 6 hours' duration. On anterior part of os uteri were 4 or 5 small bodies the size of peas	Living	Convalescence rapid	Dr. Lever again attended in next confinement 2 years afterwards.
25	Lever, op. cit., p. 221	4th pregnancy	—	During last 3 months hardly ever free from pain	Natural efforts	The bodies detected in previous confinement were still present, the two largest the size of horse-beans, the others as large as peas; the surrounding tissues thickened and hard. Os uteri dilated with great difficulty. Labour lasted more than 24 hours	Dead	Nothing occurred to prevent convalescence, except pain and heat in the region of the tumours	Dr. Lever again attended 11 months afterwards.
26	Lever, op. cit., p. 221	5th pregnancy	—	—	Natural efforts at 7½ months	Labour lasted 7½ hours	Living	Recovered	Six months after labour the disease was progressing. Patient subsequently ascertained to be "in the last stage of malignant disease of uterus."
27	Lever, op. cit., p. 218	40 12th pregnancy	—	"Anterior lip of os uteri occupied by a firm, scirrhous, tubercular deposit; posterior soft and dilatable"	Natural efforts, child under the standard size	"After some hours of great suffering the posterior lip dilated sufficiently to allow the head to pass"	Not stated	Recovery most favorable	"The pressure to which the anterior lip of the os uteri was subjected caused the disease to progress rapidly to ulceration."
28	Oldham,	42	From	Watery discharges and	Natural	Suddenly seized with	De-	Symptoms	Six weeks after delivery

	Observations sur la Grossesse, Obs. 265	para	child a year before; whites for 4 years	os uteri. Patient confined to bed 4 months before delivery with pain and hæmorrhages	8 months	5 days before delivery, without any dilatation of os uteri	composing		wards.
30	Boivin et Duges, Traité Pratique des Maladies de l'Uterus, vol. ii, p. 56, 1833	4th pregnancy	—	At the time of labour the cervix formed a large tumour, which the midwife took for the child's head	Natural efforts at term	After 8 days of pains, with much loss of blood, the "fleshy bag" opened and allowed the head to pass	Dead, decomposing	Recovered	6 months afterwards the "neck of the uterus was entirely eaten away by cancerous ulceration, with hard, jagged borders." Died some months later.
31	Bagli et Cazal, Dict. des Science Medicale, t. iii, p. 592 from Chantreuil, p. 6)	37	About 9 months before delivery	Hæmorrhages 9 months; very copious fetid discharge in intervals; no pain; progressive loss of strength. Cervix uteri entirely destroyed; it was replaced by a very large irregular ulcer	Natural efforts at term	After about 7 hours' labour a dead child was expelled, to the great surprise of her medical attendants. It was fully developed	Dead	Recovered	After delivery she regarded herself as cured, though the ichorous discharged continued. She died 5 months after delivery. Autopsy showed that ulceration had destroyed the cervix uteri and the upper part of vagina, and had opened into the bladder.
32	Meissner, from Hachmann & Cohnstein	—	—	Cancer of the uterus	Premature at 6 months	Very painful, but terminated without aid	Not stated	Recovered	The life of the mother was prolonged.
33	Boers, quoted by Hachmann & Cohnstein	—	—	Cancer of neck of womb. The disease remained stationary during pregnancy	—	Easy labour, without any unusual conditions	Living	Recovered	Left the hospital after a short time. Died after some months from cancer of the womb.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
34	Boers, op. cit.	—	—	As in the above case	—	As in the above case	Living	Recovered	Left the hospital after a short time. Further course not stated.
35	Delbech, from D'Outrepont, op. cit.	37	9 months	Hæmorrhage, especially after coitus; wasting; no pain; fœtid discharge in intervals of hæmorrhage. Cervix uteri entirely destroyed; in place of it was a broad ulcer, with uneven and fissured edges, in which the os uteri could not be distinguished	At term, natural efforts	After 7 hours' labour a fully developed child was born, to the surprise of the medical men in attendance, who had not suspected pregnancy	Dead	Recovered	Died 5 months afterwards. Autopsy showed cancerous destruction of cervix uteri and base of bladder. Body of uterus healthy.

B.—Cases in which Delivery was accelerated by Forceps, with favourable Results.

36	Schmidt's Jahrbücher, vol. cxxii, p. 300, 1864, Fischl.(Allg. Med. Ztg., ix, 8, 1864)	32 multipara	2 weeks	Hæmorrhage 2 weeks prior to delivery. Anterior lip of os thick, uneven, hard; posterior soft, smooth, extensible. Os dilated to size of thaler	Forceps, applied as soon as the os was big enough to allow of it	Partial placenta prævia. Edge of placenta felt to left. Pains feeble; dilatation of os slow; much hæmorrhage for 2 days before delivery. Tampons and enemata of secale cornutum resorted to to procure dilatation. Frequent rigors and vomiting	Decomposing	Much hæmorrhage following separation of placenta	No hæmorrhage for 3 months after delivery; then frequently recurring hæmorrhages began to take place, with fœtid discharges in intervals. Examination then showed deep excavated ulceration in anterior vaginal cul de sac and on vaginal por-

	p. 375			Cervix uteri hard, thick, uneven, scirrhous, forming a ring swollen at intervals		meter (numerous fissures having formed in the scirrhous ring) forceps were applied. Delivery caused great pain		Health was quickly re-established	Termination not recorded.
38	Löwenhardt, Chantreuil, op. cit., p. 26	29	More than 3 months	Much hæmorrhage before and during labour. Around os uteri were felt many excrescences, shrivelled, but bleeding when touched, seated on a large smooth insensitive surface	Forceps	After about 24 hours' labour os uteri was firm, and only slightly dilated. Ergot was then given. After about 12 hours the os was completely dilated, and rupture of membranes took place; delivery then completed by forceps	Living	Recovered	Patient was very weak after confinement, but recovered enough to suckle the child for 5 months; then hæmorrhages returned, and she had to wean. Later the tumours were removed, and the patient was for a time better. Termination not recorded.
39	Lever, op. cit., p. 223	—	—	A hardness amounting almost, if not quite, to scirrhous, occupying at least two thirds of the os uteri	Forceps	After labour had lasted 3 days the mouth of the womb was dilated but to a small extent, "but it was forced by the violence of the pains down almost to the os externum;" the woman bled; forceps then applied	Living	Recovered	Immediatcly after delivery the scirrhosity appeared of the size of a goose's egg. The patient lived rather more than 3 years after her confinement, and died with all the symptoms of carcinoma uteri.
40	M. Butler, from Cohnstein, Case 60	—	—	Cancer of anterior border	Forceps	Labour lasted 84 hours	Living	Recovered	—

C.—Cases in which Delivery was accelerated by Turning, with favourable Result to Mother.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
41	Simpson's Works, vol. i, p. 500 (Watt Black's edition)	Multipara	—	Carcinomatous induration of posterior lip of uterus	Turning	Symptoms demanding artificial delivery supervened by the time that os uteri was nearly fully dilated. Cervix tore slightly as head passed ("perhaps a previous incision would have been better")	Living	Recovered	The cancerous disease proceeded slowly onwards, and she died in about a year
42	Marchand, Chantreuil, op. cit., p. 91	30 4th pregnancy	—	Circumference of os studded with three projecting and very hard tumours separated by narrow furrows	Transverse presentation, turning	The os slowly dilated, and after 2 days' labour the hand could be introduced and the position, which was transverse, rectified. Feet were brought down and child delivered	Living	Recovered	Left the hospital in about 8 days.
43	Hodge, op. cit., p. 287	—	—	The whole neck of the uterus scirrhous, apparently undilatable to any extent. The finger could be merely introduced within the orifice to a long, contracted canal in the cervix	Breech presentation: feet brought down: traction with hook	After 8 days' labour os uteri dilated about 1½ inch; neck shortened; a breech presentation recognised. Next day there was fœtid discharge from vagina; os 2 to 2½ inches in diameter. By fingers and hook a foot was brought	Dead	No great degree of hæmorrhage; patient did well	—

	Journal of Obstetrics, vol. i, p. 83	nancy		presented a papillary growth of the kind known as cauliflower excrescence	labour induced at 8 months, turning				portions of it being surrounded with galvano-caustic wire, and the rest destroyed with the cautery point. Patient recovered well. 4 months afterwards uterus was $1\frac{5}{8}$ inch long, and cicatrix smooth and firm.
45	J. C. G. Jörg, Schriften zur Beförderung der Kenntniss des Menschlichen Weibes, 1812, p. 250	33 4th pregnancy	From beginning of pregnancy	Continuous hæmorrhage and lancinating pain. A cauliflower-like mass springing from the left side of the cervix uteri; the whole lower part of the uterus very hard; the vagina and labia pudendi for the most part indurated and studded with larger or smaller cauliflower-like excrescences	Bipolar version (premature at about 5th month or longer, not precisely stated)	After 19 hours' labour pains the os would only admit two fingers. The elbow presented. Child turned by the bipolar method, and a foot brought down; the buttocks were left to dilate the os without further traction. The head remained about an hour in the os. No trouble with the afterbirth	Not stated	Died 9 weeks afterwards	Condition was much improved till about the 14th or 16th day, when the old symptoms began to return. She died 9 weeks after delivery. Autopsy showed dilatation of ureters, cauliflower-like growths and ulceration of vagina and uterus.
46	Potter, Meeting of Obst. Soc. London, May 1st, 1878	29	About 7 mos.: from beginning of pregnancy	A hard lobulated mass found occupying upper and posterior part of vaginal canal, extending to within 2 inches of vulva. Per rectum a large fungating tumour felt, evidently identical with that occupying vagina. Cervix and os uteri not implicated. Rectum almost occluded	Premature labour induced at $7\frac{1}{2}$ months	Labour induced by leaving a gum elastic catheter in utero. Delivery effected by pulling down feet and bringing head through with forceps	Living	Recovered	Colotomy performed in 3rd week after delivery; a week after this patient died. No marked alteration in symptoms after delivery.

D.—Cases in which Incisions were made into the Cancerous Cervix, and which terminated favourably.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
47	Guéniot, Chantreuil. op. cit., p. 12	27 5th pregnancy	—	A cancerous tumour, as big as the fist, growing from anterior lip of os; the rest of the cervix hard, resistant, easily broken down; the vagina also invaded. Repeated hæmorrhages during pregnancy	Premature at 6½ months. Turning, incision	After 3 days ineffectual labour the os was as big as a five-franc piece, its margin hard, firm, inextensible. Head and foot presented; under chloroform a foot was brought down. To extricate the head the os had to be incised behind and to left. The operation occupied about 20 minutes. No great hæmorrhage followed	Dead, not decomposed	Recovered	Patient recovered well, and left her house in 12 or 15 days. No record of further progress.
48	Madame Lachapelle, op. cit., p. 376	—	—	Scirrhus of neck of uterus	Incisions into cervix, and forceps. At term	For 42 hours no dilatation of os took place; no hope of its occurrence being entertained numerous radiating incisions were made into the parts where the scirrhus was of least thickness. Forceps then applied	Living, weighed 7lbs.	Recovered	"The progress afterwards presented nothing remarkable."
49	Simpson, op. cit., p. 500	—	—	Extensive cancerous disease of cervix uteri	Incisions into cervix, and	After parturient efforts had lasted a considerable time, without any	Living	No aggravation of	The cancerous disease proved fatal a few months subsequently
50	Spiegelberg, Chantreul. op. cit., p. 12	41 10th	A month	Repeated hæmorrhages in the last month of	At term. Incisions, forceps	After 5 days' labour the pains became so violent and the	Living	delivery. Recovered well	Died 10½ months after delivery.

					month	tracted by long forceps		delivery	
50	Spiegelberg, Chantreuil, op. eit., p. 78	44 10th pregnancy	A month or more	Repeated hæmorrhages in the last month of gestation. Vaginal portion long and hard; anterior lip large, of cartilaginous hardness, with nodosities; posterior lip softer, as if suppurating and in process of destruction	At term. Incisions, forceps	After 3 days' labour the pains became so violent and the os dilated so little that rupture of uterus was feared; three incisions therefore made, two lateral, one anterior. Only slight hæmorrhage. Forceps then applied. Placenta expelled spontaneously. No hæmorrhage	Living	Recovered well	Died 10½ months after delivery.
51	Guéniot, Chantreuil, op. eit., p. 80	34 6th pregnancy	5 or 6 months	Cervix uteri in its left third presented a hard, uneven tumour, extending the whole length of the cervix, projecting into and in a measure obliterating its canal, below forming a projecting tongue. The remaining two thirds showed induration and irregularity, but without a distinct tumour. Os uteri semilunar in shape owing to projection of tumour. Posterior vaginal wall near cervix also altered. Leucorrhœa, not fœtid, 5 or 6 months or more. General health apparently good. Pain in later period of pregnancy	At term. Incisions, forceps	After 2 days' labour no dilatation had taken place. Five or six incisions were then made, by means of which two fingers could be introduced into cervical canal. Very little hæmorrhage but much pain with incisions. Forceps then applied, and without much traction the head was delivered, the incisions being enlarged by tearing in the process. The whole operation lasted 1 hour and 25 minutes	Living	Death on 40th day	Death from the cancerous cachexia and *erysipelas ambulans* starting from the genital organs. On autopsy, about one third of the periphery of the cervix was found still spared by the cancer; the uterine body not invaded; perforation of vesico-vaginal wall; psoas abscess

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
52	Lowenhardt, Chantreuil, op. cit., p. 86	38 8th pregnancy	—	Often ill since last confinement, 4 years previously; pain, sanious and fœtid discharge. Os uteri swollen in all its circumference, indurated, and tender; the finger could be inserted	Ergot, incisions, forceps	No dilatation taking place, even after ergot had been given, incisions were made; no pain or hæmorrhage followed. Pains being then feeble, forceps were applied. Hæmorrhage in third stage, requiring artificial removal of placenta	Living	Normal recovery	Died "in the following year" from the progress of the cancerous cachexia (confined Oct. 17).
53	Natale. Chantreuil, op. cit., p. 87	14th pregnancy, 9th labour	—	Cervix uteri converted into a hard, bossy, bleeding tender mass, invading posterior wall of vagina	At term. Incisions, dilatation with sponge, forceps	After 2 days' labour incisions made into the cervix; the prepared sponge introduced, and removed after 4 hours, when there was still little dilatation. Then forceps were applied	Living	Normal recovery	Died 6 months afterwards.
54	Simpson, Obstetric Works, Watt Black's edition, p. 500	—	—	Septum between rectum and vagina perforated by carcinomatous ulceration. The disease did not extend to uterus	Forceps, incisions	First stage of labour natural; child then extracted with forceps. It was necessary first to freely incise the carcinomatous mass. In bringing down the head the perineum, which was quite indurated and tuberculated, tore in its whole extent	Living	Rapid convalescence	The patient lived for more than 2 years afterwards, the carcinomatous ulceration gradually excavating and destroying the whole contents of the pelvis.
55	Stein, from	35 5th	—	Cancer of the lower segment of uterus and the	Incisions, forceps	Lingering labour. Premature rupture of mem-	Dead	Recovered	"It is remarkable that the mother survived, in

	Cohnstein (Case 102)	preg-nancy			forceps				
57	Wallstein, Cohnstein (Case 92)	40 6th preg-nancy	—	Cauliflower-like tumour, of the size of a citron, springing from anterior lip of os and descending into vagina	At 6th month	Incisions, forceps, on account of feeble pains and faintness. Retained placenta	Living	Recovered	No symptoms during pregnancy. 2 months after delivery hæmorrhage and increase of tumour. Death 4 months after.

E.—Cases terminating by Natural Efforts alone, unfavourably to Mother.

58	Sir C. M. Clarke, Diseases of Women attended with Discharges, 3rd edit., 1831, p. 217	40	—	Cervix uteri greatly thickened in every part, and felt like cartilage; it was tender on pressure. Profuse leucorrhœa and attacks of pain during latter part of pregnancy	Natural efforts	Two days elapsed before the os uteri was completely dilated, and the dilatation was performed with greater suffering than usual. The head at length passed through it	Not stated	Died in a few days	After the labour the pain and discharge were greatly increased. On autopsy the cervix was found very much thickened, and ulceration had commenced.
59	Ramsbotham, Medicine and Surgery, 5th edit., p. 244	—	—	The whole disc of the os uteri destroyed by malignant ulceration, the vagina being extensively affected also	Natural efforts (premature)	Child born before the midwife could arrive	Not stated	Died in the second week after delivery	
60	Merriman, quoted in Lee's Clinical Midwifery, 2nd ed., p. 92	—	—	On returning home from a case of labour Dr. Merriman was informed by Dr. S. Merriman that the patient had a scirrhus of the os uteri. She, however, conceived again	Natural efforts	With this labour no operation was performed	Living	Died soon after delivery	

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
61	Laubreis, Siebold's Journal fur Geb., vol. vii, p. 400, 1827	30 4th pregnancy	12 months before delivery	Emaciation and heetic. Metrorrhagia; bearing down; lancinating pain; urinary and rectal tenesmus and pain; fœtid discharge; rapidly advancing cachexia. Portio vaginalis uteri swollen, filling upper part of vagina, hard, fissured, teuder, bleeding readily when touched. Lower third of cervix and anterior and posterior vaginal walls equally hard and uneven	Natural efforts; head presenting fissures of os	Os uteri more than an inch wide before labour had begun. Labour set in with hæmorrhages and faintings; pains frequent and severe; os uteri descended without opening. After about twelve hours labour the cancerous cervix tore in two places, where there was thinning betwcen the lobes, and where Dr. L. had intended to incise it; considerable hæmorrhage accompanied the tear	Still-born, small, and emaciated	Severe pain, hæmorrhage, rigors, followed labour. Death by collapse in 2½ hours	Autopsy showed peritonitis over uterus. Gangrene* (?) of upper part of uterus. Lower part of uterus black ulcerated, cancerous. A fistulous opening between bladder and vagina. *(P.M. 2 days after death.)
62	Churchill, Diseases of Women, 5th edit., p. 366	40 8th pregnancy	At least 5 mos. before delivery	Cervix nearly destroyed by irregular ulceration, which had extended more deeply into the substance of the uterus posteriorly. Little, if any, thickening of the parts. Discharge profuse and fetid	Natural efforts; fissuring of os	After more than 39 hours strong labour the pains seemed to have no effect in dilating the os. While a consultation was being held as to further treatment a few strong pains drove the child into the world	De-composing	Died from peritonitis on 5th day	Autopsy showed peritonitis. Some blood in cavity of pelvis, under broad ligament. A transverse rent posteriorly at junction of body and cervix, corresponding to the most deeply ulcerated part.
63	D. D. Davis, op. cit., p. 741 (quotedfrom	32 9th pregnancy	9 months	Constaut vaginal discharge, gcnerally watery, sometimes bloody, by which she was ex-	Natural efforts	Labour lasted 2 days; constant vomiting	De-composing	Died 4 days after deli-	Vomiting soon ceased; aphthæ appeared; she became gradually weaker

	[illegible] (Wurtemburg Correspond., Blatt, No. 21, 1845)					labour. Pains very severe	pieces of it could be broken away with finger, and showed partly fibrous, partly "fungous" structure; hard nodules extending from breasts to axilla; breasts flabby.		
65	Levret, Chantreuil, op. cit., p. 25	35 multipara	—	A cancerous ulcer of the neck of the womb	At 8th month natural efforts	She was six days in labour, there being no dilatation of the os uteri, which was very hard. On the 7th day delivered of a dead child	Dead	Did not survive long.	
66	Levret, Essai sur l'Abus des Régles Gen., Art. XIII	—	Many years	The mouth of the womb was as large us the fist, and filled all the vagina	"Traction du cordon"	Labour lasted 72 hours	Atrophic, but living	Died from subsequent hæmorrhages in 6 days.	
67	Putegnat, op. cit., p. 36.	34	—	Cancer of neck of uterus; operated on with écraseur and actual cautery; became pregnant immediately on leaving hospital	Natural efforts	"very quick; horribly painful"	Not stated	Death immediately after delivery.	
68	Brudenell Exton, System of Midwifery, Case 19	—	—	Much emaciated, as in the last stage of a consumption; violent pain; there came from her a very fetid discharge; uterus quite scirrhous; to the feel was like the head of a child; a great hardness all round the os uteri, which would barely admit one finger	Premature at 7 months	Delivered by a midwife of an abortive infant, of about seven months; the midwife believed that there was a "false conception" behind. This body was the placenta shut up in the womb. With great difficulty two fingers were introduced and placenta removed	Dead	Survived 5 or 6 days	Contrary to the expectation of the author.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
69	Hugensberger, from Cohnstein (Case 103)	27 4th pregnancy	—	Medullary carcinoma of posterior lips; 9 cent. in breadth	Natural efforts	After expulsion of the child uncontrollable hæmorrhage	Living	Died	Child weighed 11 lb. Laceration of uterus.
70	Hedrich, from Cohnstein (Case 103)	—	—	Cancer of os uteri	3 weeks premature natural efforts	—	Dead	Died in 3 weeks.	
71	Kilian, from Cohnstein (Case 91)	—	—	Cancer of vaginal portion and lower segment of uterus	Natural efforts	Easy labour	Living	Died on 14th day.	
72	Desormeaux, from Cohnstein, (Case 43)	—	—	Cancer of anterior lip	Natural efforts	Labour lingering and painful. Dilatation of os uteri took place entirely at the expense of the posterior lip	Not stated	Died soon after labour.	
73	John J. Sharpless, quoted by Hachmann and Cohnstein	—	—	Carcinomatous disease of uterus, during which she conceived. Hæmorrhage, pain, and fever after the 5th month of pregnancy	Premature at 7 months	Very severe labour	Not stated	Died 3 days after	Autopsy.—The whole neck of uterus enlarged; knotty tumours 2 inches thick by 1 inch filled the vagina; an ulcerated opening through which the thumb could be passed into bladder.

	Lachapelle. op. cit., p. 371	5th pregnancy	months	months before, to 6th month of gestation; pains and watery discharge during last 3 weeks of gestation. Os uteri very irregular, surrounded by 4 or 5 hard, smooth, irregular disposed tumours, the largest behind	at term	Os uteri dilated slowly; pains severe; feverishness; and great prostration. Pains becoming feeble, forceps applied, and child extracted with ease	Epidermis peeling off	hæmorrhage followed delivery; uterus contracted well. Patient died 24 hrs. after delivery, apparently in collapse	[illegible] evidently existed before delivery. A laceration of os uteri, not involving the peritoneum.
75	J. W. Kay, Lancet, vol. ii, 1870, p. 876	33 10th pregnancy	—	Os extensively thickened and indurated with cancer	Forceps. At term	After 2 days' strong labour the os was not in the least dilated. While preparations were being made to incise it, a laceration about 3inches long took place in posterior lip. Delivery completed with forceps	Not stated	Died in 14 days	Death from exhanstion.
76	Edis, Obst. Trans. vol. xvii, p. 344	33 3rd pregnancy	About 9 months	Advanced epitheliomatous degeneration of cervix, affecting vaginal wall behind and to left; bleeding readily when touched. Repeated floodings and vaginal discharge during pregnancy	Barnes's water dilating bags, and forceps. At term	The disease affected about three-fourth of circumference of os. Os dilated with bags; then forceps applied; vaginal outlet incised with scissors, but nevertheless perineum ruptured. Labour lasted 33 hours	Living	Hæmorrhage afterwards only slight	Death from pyæmia on 13th day. Sloughing of epitheliomatous growth and part of vaginal wall. Abscess by the side of vagina.
77	Johnston, Report of Rotunda Hospital, 1871	29 5th pregnancy	—	Os uteri the size of a two-shilling piece; hard, cartilaginous and jagged; examination painful; hæmorrhage and fœtid discharge	Forceps	First stage lasted 12 hours. The head remaining in cavity for 1 hour, without any advance, notwithstanding strong pains, chloroform was administered, and forceps applied	Dead and decomposing	Died 29 hours after delivery in collapse	No autopsy.

G.—Cases delivered by Turning, with unfavourable Result.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
78	Elias von Siebold, Journal für Geburts-hülfe, &c., vol. vii, p. 578, 1827	36 14th pregnancy	17 months before delivery	Hæmorrhage, pain, tenesmus. Hæmorrhage during pregnancy very copious. much exhausting her. A scirrhus of extraordinary size and hardness, growing from right side of posterior lip of uterus, divided into lobes, and filling almost the whole vagina. The anterior lip unaffected	Turning	Labour lasted 2 days. Os dilated slowly; sponges soaked in sedative and emollient applications were inserted to dilate it, with effect. The head not descending, the child was delivered by turning. Placenta had to be manually removed	Suspended animation at birth. Lived 24 hours	Copious hæmorrhage followed delivery, reducing patient to syncope. Next day hæmorrhage recurred, and was fatal.	—
79	Chiari, Braun and Spaeth, Klinik der Geb. und Gyn., 1855, p. 187	33 6th pregnancy	2 years	Pain 3 years. Fœtid discharge a year. Hæmorrhage 2 months. The whole os uteri knotty, forming a firm hard ring	Turning	Shoulder presentation. After 8 days labour, the waters having broken, and 2 attempts made to turn, lacerations took place in cervix and posterior vaginal cul-de-sac, through which loops of intestine came down. The child was then turned and delivered	Not stated	Died on the 18th day	Autopsy. Medullary carcinoma of neck and lower part of body of uterus.
80	Elias von Siebold, Journal für Geb, Bd. iii,	—	—	Cancerous disease of the womb	Turning Full term	Ruptura uteri was feared: the still healthy part at on side of the cervix dilated; delivery was	Not stated	Died soon afterwards	Autopsy showed such destruction of uterus. vagina, and bladder, that one would hardly

				pregnant	came on at 7 mos. dilatation & turning	bags, and then delivery effected by turning. No undue hæmorrhage occurred	posing		
82	Elias von Siebold, Journal für Geb., &c. Bd. 7. p. 536	46 9th pregnancy	Since the last pregnancy	Abdominal pain; fœtid discharge. Os uteri thick, uneven, and nodular	Turning	The left arm of the child felt lying in the vagina. Cuticle already peeled off. It was not possible to introduce the hand and turn by the feet without tearing the uterus; but after some hours the os became wider and more pliable, and then the feet were brought down: Placenta followed without much hæmorrhage	Decomposing	Died on 4th day from acute puerperal fever.	—
83	C.E.Stricker Puchelt de tumoribus in pelvipartum impedimentibus. Case 24	40 5th pregnancy	From 5th month of pregnancy	Hæmorrhage, white discharge, and debility. A hard, painful, tubercular substance, springing from the left side of the cervix, and projecting into the os. Carcinomatous degeneration	Turning	The child was turned by the feet, although the carcinomatous degeneration rendered the operation difficult, and extracted	Dead	Died after 3 days.	—
84	M.J. Brown, quoted by Cohnstein. (Case 59)	—	—	Ulcerated cancer of os and cervix	Premature at 7 months. Turning	Labour lasted 44 hours	Dead	Died after delivery.	—
85	Lowenhardt quoted by Cohnstein. (Case 104)	43 10th pregnancy		Cancer of cervix uteri in first stage	Turning	Labour protracted over 3 days. Oblique position of child. Turning	Dead	Died	Rupture of uterus.

H.—Cases in which Incisions were made into the Cancerous Cervix, but which ended unfavourably.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
86	Malgaigne, Chantreuil op. cit., p. 75	30th 3rd pregnancy	—	Cervix uteri, the seat of unequal hard tumours, of which 3, the size of a filbert, occupied the anterior lip; more numerous, but smaller tumours, separated by deep fissures, occupied posterior lip. Vaginal mucous membrane indurated, especially to the right. The patient did not suspect the disease, but enjoyed in other respects good health	Premature at 6½ months. Incisions. Ergot	The membranes having ruptured and no dilatation taking place. Two lateral incisions were made about 36 hours after commencement of labour. No hæmorrhage, no pain followed, but afterwards pains ceased, and vomiting set in 24 hours later. ʒss of ergot was given (child then alive). The next day there was fœtid discharge. Four days after the beginning of labour, a dead child was expelled. No subsequent hæmorrhage. Placenta followed naturally	Dead	Died 4½ days afterwards	Autopsy showed laceration of cervix. Softening and laceration of the cancerous tumours. No lesion of peritoneum, bladder or rectum. No pus in uterine, hypogastric, or ovarian veins. A collection of pus in left pleura, and some small gangrenous points in left lung, although the patient had never complained of anything referable to this part.
87	Simpson, op. cit., p. 500	—	—	Cervix indurated by carcinomatous induration at one side	Incisions into cervix and natural efforts	Patient had been ill for 3 days, was much exhausted, and pulse extremely rapid; cervix not at all inclined to yield. 2 or 3 small	—	Pulse never fell, and she sank in 2 or 3 days afterwards.	
				[illegible]	[illegible] months. Incisions.	[illegible]			

	Hachmann			lip, filling the vagina, and involving bladder and rectum	months. Incisions.	cise it			

I.—Cases terminated by Operations involving the Destruction of the Child, with favourable Results.

89	Galabin, Obstetrical Transactions, vol. xviii, p. 239	41 12th pregnaucy	Symptoms began in first month of pregnancy	Carcinomatous growth, involving whole circuit of os uteri, extending to pelvic wall behind, and bladder in front; very thick and hard. Repeated hæmorrhage during pregnaucy. Great anæmia and cachexia	Barnes's hydrostatic dilators and cephalotripsy: at term	After 6 hours dilatation, the largest bag having been ruptured, the os uteri would admit 3 fingers. The cephalotribe was then applied, but delivery was difficult. After three hours manipulation the os had become so dilated that it was possible to pass the whole hand through it	—	Recovered	Fœtid discharge, sloughing of a part of the growth, and pyrexia followed. Patient left hospital on the 60th day. Further progress not recorded.
90	P. R. Menzies (quoted by), but authority not given	—	—	Ulcerated carcinoma of cervix	Embryotomy	Fœtus expelled in fragments during ensuing 3 months	—	Recovered	Further history not given.
91	Oldham, London, Journal of Medicine, 1851, p. 206	39	—	A mass of ulcerating cancer in the cervix. Disease had not advanced so fast during pregnancy as Dr. Oldham would have expected	Craniotomy and crochet	Os uteri dilated to about the size of a crown piece; patient then getting weak and exhausted, immediate delivery was thought necessary, and craniotomy performed	—	Lived about a month	Cervix found to be the seat of malignant ulceration. Some ulcerated patches had perforated posterior wall of vagina, and communicated with peritoneum. A low form of peritonitis with purulent effusion.

J.—Cases delivered by Operations involving the Destruction of the Child, with Unfavourable Results.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
92	Angus Maedonald, Edinburgh Med. Journ., vol. xiii, p. 767, 1868	34 primi-para	More than 21 months	The whole cervix uteri replaced by a mass of cartilaginous hardness, which filled the pelvis in front	Incisions. Perforation and cephalotripsy (turning and forceps unsuccessfully tried)	After 20 hours labour the os was dilated from the size of half-a-crown to that of a crown piece. Incisions were made and turning attempted, but, owing to the obstruction formed by the cancer and spasmodic condition of uterus, without success. Then forceps applied, but could not be got to lock. Delivery then effected, with much difficulty, with cephalotribe. No considerable post-partum hæmorrhage, nor appreciable injury to passages	—	Died 5 days afterwards	Post-mortem imperfectly performed. Peritonitis, bronchitis, and albuminuria before confinement.
93	Dorrington, Provincial Medical and Surgical Journal, 1843, vol. vii, p. 6	35 8th preg. nancy	About 13 months before delivery	A difficult previous labour, owing to incipient disease of os uteri 21 months previously. Pain, fœtid discharge, and occasional hæmorrhages since; os uteri	Premature at 8 months. Craniotomy	Pains vigorous and natural. After about 12 hours labour the os had dilated as much as it was thought it would do, and head was then perforated	Decomposing	Died in less than half an hour after delivery	On autopsy a laceration of the right side of cervix uteri was found not involving peritoneum. Cervix uteri on section seen to be converted into a cartila-

				rest so scirrhous as to preclude all idea of dilatation. Much cachexia and œdema		then introduced through the os to remove placenta			
94	Dietrich, Diss. Der. Krebs. des Geb. als Comp. der Geb. Breslau, 1868, p, 11	38 3rd pregnancy	—	Fœtid discharge and pain 13 months; profuse hæmorrhages 4 months. Upper 1½ inch of posterior vaginal wall infiltrated and fissured; posterior lip of os not to be felt; a funnel-shaped crater with rigid walls, at left of which was the canal of cervix; anterior lip of os thick, hard, wide, infiltrated; anterior wall of vagina not involved. The part easily broken down, and bleeding on examination	Premature at 7 months. Turning. Perforation	After 2 days pains the os was large enough to admit the points of 2 fingers. After 3½ days labour the os was as big as a crown piece, and the breech presenting; the uterus tympanitic. A foot was brought down, and in the subsequent traction the trunk was pulled from the head. The head was delivered by perforation and crotchet. To remove the placenta the whole hand had to be introduced into the uterus	Decomposing	Died the next day	Autopsy showed much wasting. Peritonitis. Epithelial cancer of cervix, involving nearly the whole thickness of uterus, but not peritoneum or other adjacent parts. The peritonitis was believed to have begun at the commencement of labour
95	Valenta, Archiv. für Gynæcol., Bd. x, p. 405, 1876	7th pregnancy	2 years	Copious losses of blood during pregnancy. Extensive carcinoma of portio vaginalis and vaginal cul de sac	Craniotomy. Incisions into os	In the course of the labour pains went off. Douching; introduction of flexible catheter; ergot; plugging used without effect. Perforation then resorted to, os being 1⅔ inches wide. Incisions then had to be made and the cranioclast applied	—	Died; date not stated	Autopsy showed a laceration, extending up to peritoneum. No peritonitis.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
96	Depaul, reported by Schmitt, Archiv. de Tocologie, 1876, p. 111	9th pregnancy	2 years	Constant hæmorrhage, wasting. The os uteri hard, thickened, presenting nodular projections, the left half of the posterior lip being the only part thus affected. Uterus a month before delivery, reaching "au niveau de l'epigastrium"	Pregnancy supposed to have reached 10½—11 months. Delivery by disarticulation	Expulsive pains irregularly for about a month with fœtid discharges copiously. These pains became more violent; the uterus was swollen, and tympanitic on percussion; the os dilated to the size of a 5-franc piece; membranes ruptured and right shoulder presented; child extracted by disarticulation. Placenta removed by introduction of hand into uterus	Putrid	Died on the 8th day after delivery	Autopsy showed the lower part of uterus converted into indurated masses, which left no doubt as to their nature. No peritonitis. Gangrenous tissues around os.
97	Robert Lee, Clinical Midwifery, 2nd edition 1848, p. 90	41	2 years	Os uteri hard, irregular, and ulcerated. The symptoms of malignant disease of uterns had commenced 2 years before, and the pain and discharge became aggravated when conception took place	Craniotomy	After 24 hours labour the os was so little dilated that the presentation could not be ascertained. After 48 hours' labour, the os being still undilated, the head was perforated. On the third day the os opened enough to allow the crotchet to be introduced and the head extracted. The propriety of making in-	—	Died the next day	On autopsy the neck of the uterus extensively lacerated, presented the appearance of an irregular dark coloured, disorganised mass.

98	A hwell Hospital Reports, vol. ii, p. 247	preg nancy	from the begin- ing of preg- nancy	[illegible] down to labium, involving upper part of nymphæ, and reaching to mons veneris. The most projecting parts ulcerated, and at the time labour was induced, the whole external parts of generation were involved	duced in 7 months. Craniotomy	came on. As the head was urged towards the outlet, it became evident that the latter would not allow its exit without tearing and probably much hæmorrhage. The head was therefore perforated, and then the child was quickly expelled. Scarcely any blood was lost			post-mortem on anterior lip of uterus.
99	Herman, supra	30 8th preg- nancy	21 months	Cancer of rectum	Cephalo- tripsy at term	Supra	—	Died on 4th day	Peritonitis.
100	Godson, Obstetrical Transactions, vol. xix, p. 40	—	—	Extensive epithelioma of cervix	Dilatation of os and cephalo- tripsy	Dilatation of os with Barnes's bags, turning, perforation at occiput and cephalotripsy. Though excessively rigid, the margin of the os apparently escaped laceration. Delivery tedious and difficult	—	Died on 12th day	

K.—Cases delivered by Cæsarean Section.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
101	Oldham, Guy's Hosp. Reports, vol. vii, p. 426	28 6th pregnancy	Not longer than pregnancy	Severe pain (sometimes "agonising distress"); abundant sanio-purulent discharge; occasional hæmorrhages. The whole lower segment of uterus converted into a mass of malignant disease, nearly filling the upper part of pelvis, without even a margin of normal tissue. The disease was deeply lobed and fissured, but the os uteri could not be made out, nor the presenting part ascertained	Cæsarean section. At or near term	Labour pains came on at or near term, the effect of which was to press the cancerous mass down into the cavity of the pelvis, but to cause no dilatation of os uteri. Cæsarean section therefore performed	Living	Successful	"Six weeks after operation the disease had shrunk somewhat, the discharge was not very abundant, she had been free from the ordinary cancer pains, and her general health was well supported. A moderate menstrual bleeding had lately occurred." Further progress not recorded.
102	Greenhalgh, Obst. Trns., vol. ix, p. 241, and British Med. Journal, vol. ii, 1867, p. 491	27 4th pregnancy	13 months before delivery	Epithelioma of cervix. Offensive discharge; repeated losses of blood. Cervix spongy and fissured, bleeding on the slightest touch; os patulous, crescentic, with concavity forwards; margin lobulated	Cæsarean section. At term	Operation performed before the accession of labour	Living. A small and feeble child	Successful	"For more than 6 months after the operation the disease, which was advancing rapidly, underwent considerable improvement, the hæmorrhage and pain ceasing, and the local affection dwindling to an almost inappreciable degree.

	vol. viii, p. 343	pregnancy		domen, with watery discharge, at times offensive. Tissue of cervix uniformly replaced by irregular nodulated infiltration of cartilaginous hardness; ulcerated posteriorly	on 6½ and 7 mos.: Cæsarean section	uteri not being enough dilated to admit finger, Cæsarean section was performed	some attempts to breathe		months after operation "looks well, and is gaining strength rapidly." Local condition much the same. Termination not recorded.
104	Edmunds, Lancet, 1861, vol. i, p. 4	38 3rd pregnancy	2 years before delivery	Fœtid sanious discharge and lancinating pains, A hard, tuberculated, superficially ulcerated mass, about 2 inches in diameter, projecting into the vagina. One finger could be got through this unyielding mass, and presenting part felt	Cæsarean section. At or about term	Labour came on at about term, but after nearly 6 days' labour, no dilatation had taken place. Cæsarean section therefore performed	Living	Successful	Some peritonitis followed, but the patient was convalescent on the 14th day. Subsequent course not recorded.
105	Greenhalgh, British Medical Journal, 1867, vol. ii, p. 491	30 5th pregnancy	9 months before delivery	Constant pale red, brown and offensive discharge; pain; debility. A large epitheliomatous growth of the cervix, which nearly filled up the vagina, and from which she bled freely	Cæsarean section	Labour pains continued for 5 hours without having any effect upon the os uteri	Living	Died 69 hours after the operation	Autopsy. Whole of the neck and lower part of body of uterus involved in epithelial cancer. Peritoneum vascular, but no lymph. No secondary deposits.
106	Galabin, Obstetrical Trans., vol. xviii, p. 286	36 9th pregnancy	About 5 months before delivery	Constant hæmorrhage; offensive discharge; pain. Edges of os uteri irregular and ulcerated, and surrounded by a ring of densely hard cancerous infiltration, at least an inch in depth everywhere	Cæsarean section. At about 8th month	Pyrexia, pain, uterine contraction, with absence of signs of fœtal life, led to the performance of the operation earlier than was intended	Decomposing	Died 38 hours afterwards	Autopsy showed an early stage of peritonitis. Ulcerated cancerous surface involving peritoneum of Douglas's pouch.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
107	Greenhalgh, British Medical Journal, 1867, vol. ii, p. 491	29 1st pregnancy	—	A cancerous tumour of the rectum, which had reached such a size that in no part of the pelvis could more than the index finger be passed. Os uteri could not be reached	Cæsarean section. At a little beyond 8th month	Operation performed before the accession of labour	Living	Death on the 6th day apparently from exhaustion from vomiting	Autopsy showed no trace of inflammation. A tumour the size of two adult fists, springing from lower part of sacrum, blocking up pelvic outlet, and reaching to within half an inch of symphysis. No other visceral disease.
108	Hall Davis, Lancet, vol. ii, 1865, p. 699	31 7th labour	6 months before delivery	Hæmorrhages and pelvic pain. Vagina greatly contracted by a dense indurated deposit, so that it was difficult to pass one finger up to the os uteri, the posterior lip of which was also involved, though to a less extent. The surface was irregular and ragged, and the discharge offensive	Cæsarean section. At or near term	Labour pains came on at or near term. An attempt was made to apply forceps, but even one blade could not be made to pass. Cæsarean section than performed	Living	Died 41 hours after operation	Autopsy showed commencing peritonitis; dilatation of one ureter. Posterior three-quarters of vagina ragged, sloughy, infiltrated with cancer. The greater part of posterior lip of os infiltrated with cancerous tissue.
109	Zweifel, Archiv für Gynæcol., Bd. x, p. 405, 1876	—	—	An enormous cancer of pelvic cavity	Cæsarean section. At beginning of 10th	—	Living	Death	Acute gangrene of the cancerous mass.

	Schaeffer, Sectio Cæsaren bei carcinoma, &c., Breslau, 1976, p. 19	13 pregnancy	[illegible]	ing; vulva œdematous; vagina uneven, ulcerated, with masses of new growth, discharging blood and fœtid pus. The finger could not be introduced until with labour pains some softening took place, and then one finger could be got up to the os. The posterior and right vaginal walls principally affected	At beginning of 9th month	about 15 hours Cæsarean section was performed. Uterine wound closed with catgut sutures			neal cavity; uterine sutures found to have become loosened and untied. Cervical portion of uterus and the whole upper part of vagina converted into a greyish-white, hard, in parts cheesy, mass, with a gangrenous smell. Cause of death believed to be the intra-peritoneal hæmorrhage.
111	Braxton Hicks, Meeting of Obstet. Soc. London, May 1st, 1878 (Med. Journals)	11th pregnancy	About 2 years	Rectum surrounded by a malignant deposit, and recto-vaginal septum consolidated into a dense and unyielding mass, nearly filling the vagina	Cæsarean section. At beginning of 9th month	Feverishness, followed shortly by labour pains, set in the day before operation, patient being about 8 months pregnant. Cæsarean section. Uterine wound closed by carbolised silk sutures	Living	Died 24 hours after operation	On autopsy uterine wound found gaping, every stitch having been torn away. A small quantity of grumous purulent fluid in peritoneal cavity. Much vomiting for 12 hours before death.
112	Routh, quoted from Cohnstein (Case 75)	—	—	Ulcerated cancer of os and cervix	Cæsarean section	After 90 hours labour	Dead	Died 5 days after	From peritonitis.

L.—Cases which ended in Rupture of the Uterus.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
113	Hecker, Monatsschr. für Geb., vol. xxxi, p. 296	45 11th pregnancy	—	Tolerably severe hæmorrhage during pregnancy. A peculiar nodular condition of posterior lip of os uteri, the anterior lip on the contrary, thin and intact	Died undelivered. Incomplete rupture of uterus	After 36 hours' labour the waters broke, and on examination a tumour found in front of uterus. (Blood.) Os uteri the size of a gulden. Died about 48 hours after commencement of labour, in collapse. Child extracted by turning after death	—	Dead	Autopsy showed rupture of uterus, not involving the peritoneal covering. About 2 pounds of blood extravasated underneath peritoneum, reaching from utero-vesical cellular tissue to right kidney. A firm mass, about 2 cm. thick in posterior lip of os. Shown by microscope to have the characters of "medullary sarcoma." Secondary cancerous nodules in pleuræ.
114	Scholz, quoted by Chantreuil, op. cit., p. 48	3rd pregnancy	—	—	Died undelivered. Rupture of uterus	Died from exhaustion during labour, which, in spite of strong uterine contractions, had been ineffective in expelling the child	—	Death	Autopsy showed uterus torn below, and as if perforated by ulceration. Child outside uterine cavity, among the intestines. Uterine walls presented a scirrhous hardness as big as the palm of the hand.
115	H. Davies, quoted by Lee, op. cit.	—	—	Cancer	Rupture of uterus	Labour at full period; uterus ruptured	—	Death	Death speedily followed delivery.
116	Abegg,	41	—	Cancer of the vaginal	At 8th	Severe hæmorrhage.	—	Death from	At the autopsy a good-

rupture of uterus. had escaped into the abdominal cavity

	p. 27				rupture of uterus.	had escaped into the abdominal cavity			
117	Robert Lee, Clin. Midwifery, 2nd ed., p. 91	—	—	Malignant disease of os uteri	At 7th month. Vectis	The os uteri did not dilate sufficiently to allow the fœtus to pass, and it was extracted by the vectis. Symptoms of ruptured uterus soon followed	—	—	The whole orifice and neck of the uterus was destroyed by cancerous ulceration, and the anterior part of the cervix was lacerated.
118	Chantreuil, op. cit., p. 89	43 11th pregnancy	—	Cervix indurated, rigid, infiltrated by carcinomatous product; fissured	Transverse presentation. Rupture of uterus	After 3 days' labour, the os was about 1½ inch wide. The hand presented. The operator introduced his hand into the uterus without great difficulty, but found the child in the abdominal cavity. A foot was seized, and child was drawn back and delivered per vias naturales. Placenta followed without hæmorrhage	Dead	Died an hour and a half afterwards.	
119	Oldham, London Journal of Medicine, 1851, p. 204	33 5th pregnancy	7½ months	Frequent hæmorrhages and watery discharge. Pain less than usual in carcinoma uteri. Malignant disease (at 7th month of pregnancy) had already destroyed a considerable portion of both lips of os uteri, leaving a hole big enough to admit two fingers. It was unusually hard and rigid	Patient was allowed to go her full time; pains came on and uterus ruptured	Fœtus presented with breech. Cervix yielded somewhat to pains, but anterior wall felt like a mass of hardened mortar. After about 12 hours of labour pains, sudden collapse and death	Dead	Fatal	Rent in posterior wall of uterus, through which fœtus protruded. Body of uterus healthy; disease confined to cervix. Vagina healthy.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
120	Martin le Jeune, Mémoires de Médecine, Paris, 1835, p. 280	—	No symptoms before pregnancy	Sharp and constant pain; vomiting, colics, and metrorrhagia. Border of os extremely hard; a tumour on left side	Rupture of uterus	Uterine pains came on at 6th month; watery discharge at first clear, then brownish, as if mixed with meconium. Some days after a cracking sound was heard in the abdomen; the discharge became purulent and fœtid; there was hectic fever, and patient died about 9 months after beginning of pregnancy. (Dates not clearly given)	Dead	Death	Uterus adherent to lower part of abdominal walls, mostly to left. Fundus in epigastrium. Reddish fluid in abdomen. Above and to right, uterus presented a fissure size of a 30-sous piece, of which the circumference was gangrenous. Inferiorly, a part of the body and the whole of the neck presented an enormous scirrhous tumour, which obliterated the orifice. Uterine cavity contained a child of ordinary size, macerated and shrivelled, but not putrid.
121	Martin le Jeune, op. cit., p. 282	49 Multipara	A long time	A tumour adherent to the whole extent of the posterior vaginal wall, the prolongations of which merged into the os uteri, which they closed; its surface irregular, as if fringed, and fœtid fragments could be broken off; it	Labour came on at 6½ months. Rupture of uterus	Regular, continuous, and strong pains produced no dilatation of os. Tumour almost entirely filled up the vagina. After 24 hours' labour os dilated a little, and tumour came lower down. After 2 days' labour, without further	Dead	Death 12 hours after supposed rupture. Emphysema of abdominal walls before death	Autopsy refused.

						side of abdomen was found a hard projecting tumour, which was considered to be the back or feet of the child, having passed through a rent of the uterus, which no longer formed the projecting tumour it had done before			
122	Kiwisch, quoted from Cohnstein (Case 134)	—	—	Cancerous infiltration of cervix	Died undelivered. Rupture of uterus	—	—	Died.	
123	D'Outrepont, Abhandlungen und Beiträg. Geb. Inhalt., 1822, Erst Theil, p. 276	34 1st pregnancy	—	Uterine symptoms 4 years (since marriage). Soreness of external genitals. Vagina hard, thickened, uneven, knotty, contracted. A cauliflower-like growth, resembling condylomata, filling the pelvic inlet. Deep fissures were felt between the parts of this growth, but neither uterus nor os uteri could be felt. Examination followed by hæmorrhage. Hæmorrhage of fœtid discharge during pregnancy	At term	With the 4th pain the patient screamed, complained of pain in left uterine region, sighed, shivered, became slightly convulsed. The child could then be felt under the abdominal walls. D'Outrepont saw the patient within 1½ hour after this; she was then dead, and he opened the abdominal cavity and removed the child	Dead	Died almost immediately	Antopsy showed a rupture of uterus on its left side, 6 inches long. The child, placenta, and much blood were in the peritoneal cavity when laparotomy was performed. No trace of the cervix uteri or os externum could be found; it was converted into the cauliflower-like mass mentioned. Posterior wall of bladder, ureters, and rectum were cancerous. Uterus seemed thinner at the seat of the rupture than elsewhere.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
124	Hesse (Horn und Nasse's Archiv, 1832), quoted by Hachmann	40 12th pregnancy	About 2 years since last confinement (?)	Hæmorrhages 2 years; fœtid discharges 3 months; cachexia. Os uteri surrounded with cartilaginous excrescences. 2 fingers could be introduced into a canal 1½ inches long, closed above by the internal os	Died undelivered at or near full term	Liq. amnii escaped; next day symptoms of peritonitis; 4 days afterwards labour pains without producing any dilatation of os; attempts were unsuccessfully made to manually dilate it. She died 7 days after escape of liq. amnii	Well developed child, decomposing	Death	Autopsy showed evidence of peritonitis and metritis. Lower segment of uterus in part indurated; os uteri not dilated and perfectly unyielding.
125	P. R. Menzies, Glasgow Medical Journal, vol. i, 1853, p. 129	28 8th pregnancy	Uncertain	Os uteri closed and firm; a nodular flattened mass of cartilaginous density overlapping the os, thickened, hardened, and tuberculated	Died undelivered at 17th month	Irregular pains like those of labour continued with varying severity for 7 months after the expected termination of pregnancy	—	—	Autopsy. Os consisted of a firm and tough ring, as hard as cartilage, of a pale bluish white colour; very resistant to the knife. This condition affected the lower fourth of the uterus. Fœtus not decomposed.
126	Depaul, Chantreuil, op. cit., p. 43	32 8th pregnancy	Symptoms began about a fortnight after pregnancy	Pain; hæmorrhages; fœtid discharges. Cervix uteri gone. Os the size of a 2-franc piece, its borders of woody hardness; orifice completely obstructed by a rounded tumour not projecting into the vagina, and as hard as the surrounding	Died undelivered	Pains came on at about 8th month, and continued for about a month, without producing any dilatation; uterus at length becoming of stony hardness from almost continuous contraction. There were frequent hæmorrhages,	De-composing, macerated	Dead	Autopsy showed traces of peritonitis. Putrescent condition of interior of uterus. Carcinoma invading uterine orifice in all its circumference, the thickening being more to right than to left.

[illegible] claims were made, which rendered [illegible]

						cisions were made, which rendered the application of forceps possible; but the head, which was flaccid from decomposition, could not be held. Patient died 10 minutes after the incisions			
127	Oswald, Siebold's Journal, vol. v, p. 156, 1825	7th pregnancy	5 months before death	The middle of the pelvis filled with a projecting, fleshy, for the most part cartilage-like mass, which gradually merged into the vaginal wall. The finger could be passed through an opening in this up to the internal os uteri, but not further. The mass could easily be torn. Severe hæmorrhages	Died undelivered	Pains came on prematurely and lasted about half a day, then went off	—	—	3 weeks after the attempt at labour the patient died without great pain, but with great prostration. No autopsy.
128	Denman, Introduction to the Practice of Midwifery, 6th edition, 1824, p. 235	—	—	A large fleshy tumour at the extremity of the vagina (resembling and nearly equalling in size the placenta), growing from the os uteri. The largest excrescence Denman had ever seen. Alarming hæmorrhages during pregnancy	Perforation. Died undelivered	Tumour was so large that there was no possibility of the head passing it; it was thought impossible to remove the tumour, therefore perforation was performed. Many fruitless attempts to extract the child, after which patient was so exhausted that it became necessary to leave her to repose; soon after she died	No marks of putrefaction	Death	No disease in other viscera. A large cauliflower excrescence found growing from anterior part of os uteri

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
129	Ramsbotham, loc. cit.	—	—	Os uteri partially destroyed by cancer, the remainder richly studded with scirrhous tubercles. Patient worn down to the lowest ebb of life	Died in labour (undelivered) from exhaustion	Death had just taken place when Dr. R. got to her. Child not alive, and therefore no effort made to extract it. Os uteri the size of half-a-crown	—	Death	Os uteri found post-mortem to be partially ulcerated, the principal portion thickened and exceedingly indurated.
130	Simpson, Obstetric Works, Watt Black's ed., p. 498	—	—	Extensive cancer of the cervix uteri	Undelivered	Efforts at labour seemed to come on more than once, when and after mother thought gestation had reached its term	—	Death	Died undelivered, apparently from peritonitis. Extensive effusion of lymph on surface of uterus, but no rupture.
131	Robert Lee, Clinical Midwifery, 2nd edition, p. 498	—	—	A great soft fungoid tumour growing from the entire circumference of the os uteri and the cervix in an indurated state. Hæmorrhage	Died undelivered	Great hæmorrhages and vomiting, from which she died, no attempt having been made to expel the child	Decomposing	Death	Os and cervix were both extensively disorganised from cancer.
132	Miller, London and Edinburgh Medical Journal, 1844, p. 279	37 8th pregnancy	Between 7 and 8 months before death	Os uteri affected in its entire circumference, but especially on its posterior aspect, with deep rugged ulcers; the walls of the uterus, as far as the finger could reach, thickened and indurated. Lancinating pains, fœtid sanious discharge	Died undelivered at full term	No symptom indicating labour had appeared	Decomposing, evidently had been dead many days	Death	Autopsy showed acute peritonitis. Cervix uteri involved in its entire extent in deep rugged ulceration, and the surrounding parietes, for fully 1½ inch, were thickened and indurated; on the left side the induration extended as the broad ligament in

	Reports, vol. vii, 1851, p. 436	para	year	severe pains in loins and hips. Cervix converted into a mass of malignant disease, particularly hard and unyielding	tended, but the patient was so much exhausted from hæmorrhage and discharges, that it was abandoned	Uterus seemed to be in a state of tonic contraction. Severe hæmorrhages occurred shortly before pains. Presenting part could not be reached	posing	Death	and pressed down into a cancerous mass. No rupture of uterus. Full layer of fat on abdominal walls.
134	Elias von Siebold, Journal for Geb. &c, Bd. 3 p. 49, 1819	31 3rd pregnancy	5 months before death	Dull sacral pain; watery, sometimes sanious fœtid discharge; coitus painful, and followed by discharge of dark fœtid blood; great loss of strength. A firm, irregular tumour, size of a hen's egg, in vagina, growing by a thin pedicle from the vaginal portion; characteristic cancerous fœtor. Three months before death it was cut off with scissors, considerable hæmorrhage following. After this the symptoms improved. A month after, the excrescence had returned	Died undelivered, 5 months pregnant	Copious diarrhœa, hectic, no sign of labour, preceded death	—	Dead	Autopsy showed vagina ulcerated, but no communication with abdominal cavity or with rectum. Vaginal portion destroyed, but internal os closed; a fœtus in utero, judged from its size to be at the beginning of the 6th month.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
135	Pfannkuch, Archiv. für Gynæcologie Bd. vii, p. 169	42 13th pregnancy	At least 6 months	Daily hæmorrhage; abdominal and sacral pain; urinary and rectal tenesmus. Whole anterior vaginal wall and lower part of uterus formed a hard uneven tumour, beginning almost immediately behind the symphysis, and extending on each side close to the pelvic wall. The hinder part of cervix soft and healthy to the touch. Much tenderness and slight hæmorrhage on examination	Died undelivered	She was believed to have fully reached, if not exceeded, the normal term, but no pains came on. She sat up in bed to drink and fell back dead	—	—	Autopsy. The tumour was a large medullary carcinoma; it affected the whole cervix except two fingers breadths of the posterior part of bladder, and the broad ligaments almost to the pelvic wall; not the rectum.
136	Roulston, Association Medical Journal, 1856, p, 830	34 7th pregnancy	A year	Continuous vaginal discharge, offensive, sometimes bloody. Pregnancy not suspected till 7th month. A firm lobulated mass almost occluding the vagina; parts of it breaking down under pressure of examining finger	Died undelivered	Uterine action accompanied with hæmorrhage. Dilatation of vagina attempted with sponge plugs, but given up after 2 days trial on account of the pain caused. Presentation ascertained to	Fœtal heart pulsated till day before death	Died 20 days after commencement of labour pains	Body much wasted. No disease in uterine walls. Vagina infiltrated with cancerous deposit throughout its whole extent, thickness being in some parts 2 or 3 inches. Bladder showing signs of inflammation and disintegration Ureters dilated. No

	Schmidt's Jahrbücher, vol. xxiii, p. 76, 1839	7th pregnancy		dominal region, and very fœtid vaginal discharge; neck of womb affected with cancer	cous abortion	Pains came on suddenly; in 24 hours a 4 months fœtus expelled, with frightful pain	improvement; death in 7 weeks	at first somewhat better; but the improvement was of no long duration, and death followed in the 7th week.
138	F. W. Mackenzie, Obst. Trans. vol. i, p. 11	—	—	Scirrhous contraction of rectum, about 4 inches above anus. A hard scirrhous deposit, about the size of a pigeon's egg, in anterior segment of cervix	Abortion induced at 14th week	Abortion induced by injection of water into the uterus, supplemented by galvanism. The process lasted 4 days. Comparatively little hæmorrhage or pain	Recovery rapid and satisfactory	Remained recumbent about a week, and on resuming her domestic duties felt stronger and better than she had been previously to operation. Termination not recorded.
139	Levret, Essai sur l'abus, &c. Art, xiii.	—	—	—	Abortion at 3 months	In each of these the fœtus was putrid, and the placenta putrid, and discharged in fragments, which were difficult to distinguish from pieces of slough, which for some time came away from the os uteri	Survived a year	Both were treated by "les grands remedes," and by different methods, without effect.
140	Levret, op. cit.	—	—	—	Abortion at 2½ months		Survived 2 years	
141	Sommer, Starkes Archiv. fur Geburtshülfe, 1791, p. 288	37 7th pregnancy	More than 7 mos. probably nearly 3 yrs.	Hæmorrhage gradually increasing in quantity and frequency. Pain in hypogastric and sacral regions. On examination, scirrhus uteri found	Abortion between 4 and 4½ months	Few, but extraordinary severe pains	Survived 4 months	Pains, fœtid discharge, and hæmorrhage continued; finally, perforation of bladder and rectum, with incontinence of urine and fæces.
142	Lever, op. cit. p. 227	1st pregnancy	—	Carcinoma uteri at time of marriage	Abortion between 3rd & 4th month	—	Recovered	In 5 months again became pregnant.
143	ditto	2nd pregnancy	—	—	Again aborted	—	Recovered	In 3 months again pregnant.

No.	Authority and reference.	Age and number of pregnancies	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Immediate result to mother.	Further history.
144	Lever, op.cit.,p.227	3rd pregnancy	—	—	Aborted in a few weeks	—	Died in 8 weeks	Ulceration speedily followed the last abortion. Its progress was rapid, and in 8 weeks she died.
145	Lever, on pelvic tumours obstructing parturition, (Case 26.)	—	—	Cauliflower excrescence	Abortion at 4th month	Hæmorrhage accompanying the miscarriage was very profuse	Recovered	In 6 months time again pregnant.
146	ditto	—	—	—	Abortion at 13th week	Hæmorrhage most alarming; it reduced her powers to so low an ebb, that she	Lingered for some weeks, and then sank.	—
147	Laubreis, Siebold's Journal für Geb.,vol. vii, p. 409	42 1st pregnancy	About 4 months	Cutting and burning pain; hæmorrhage, fœtid discharge, excoriating the neighbouring parts; emaciation, hectic. Os uteri open, admitting the finger; hinder part of os as thick as the thumb, hard, rough, studded with excrescences, painful and bleeding when touched. Hardness and irregularity extended over the whole vaginal portion	Spontaneous abortion at end of 3rd month	Severe hæmorrhage accompanied abortion, and recurred afterwards; there was great pain	Died between 4th and 5th days after abortion	Rigors and "signs of sphacelus" followed the abortion. No autopsy.
148	Crosse, Midwifery, p. 49	Und.40 several previous	More than 3 months	Pain; foul, stinking discharge; an ulcer in os uteri; "emaciated and haggard from suffering	Abortion at 4th month	—	Died 3 months afterwards	No autopsy.

	Hachmann and Cohnstein				3rd month			
150	Elias von Siebold, cas. cit. (13)	—	—	—	Abortion in 2nd month	Terribly severe hæmorrhage, from which her death was expected; but she survived	—	Final result not stated.
151	Herman, supra	33 9th pregnancy	5 months	Cancer with fixation of cervix	Abortion induced at 5 months	Destruction of part of growth with actual cautery, and dilatation of cervix with laminaria tents	Died 7 months afterwards	Much relief to symptoms followed abortion.
152	Lever, Pelvic tumours obstructing parturition, Case 29	4th pregnancy	2½ years	Posterior part of vagina in a state of scirrhous ulceration; ichorous and offensive discharge, alternating with hæmorrhages; rapid emaciation	Abortion at 5th month	Hæmorrhage alarming; pains violent and long-continued, lasting a long time without expulsion of ovum, which being felt protruding through the stricture of vagina was removed "with a little manipulation"	Lived for 4 months afterwards	"A miserable spectacle, for 3 weeks after the abortion the recto-vaginal partition ulcerated through.
153	Michaelis, from Cohnstein, Case 52	40 multipara	—	Cauliflower excrescence hanging down from os uteri in vagina	Aborted in 5th month	—	Died shortly after delivery	Hardly any symptoms during pregnancy.
154	Burdach, from Cohnstein (Case 78)	—	—	Far advanced cancer of cervix	Abortion in 4th month	—	Died	—
155	Kiwisch, from Cohnstein (Case 132)	—	—	Cancerous infiltration of cervix	Abortion	—	Recovered	No marked acceleration of the cancerous change.
156	Kiwisch, from Cohnstein (Case 133)	—	—	Cancer of cervix	Abortion	—	Recovered	No marked acceleration of the cancerous change.

O.—CASES IN WHICH THE CANCEROUS PART WAS REMOVED DURING PREGNANCY.

No.	Authority and refercuce.	Agc and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
157	Benicke, op. cit., p. 34	30 2nd pregnancy	—	Hæmorrhages, leucorrhœa. Vaginal portion deeply fissured, the posterior lip of os formed an irregular, easily bleeding, tumour, about as big as a pigeon's egg. At about the end of pregnancy the cancerous mass was cut away with scissors and sharp spoon, and actual cautery applied to the raw surface; there was little hæmorrhage. Symptoms then ceased.	Natural efforts; at full term	Labour came on 5 days after the operation; it lasted less than 11 hours; hardly any bleeding.	Living	Uninterrupted recovery	4 months afterwards the disease had returned, and another operation was performed. No further record.
158	Benicke, op. cit., p. 345	30 2nd pregnancy	About 3 months before abortion	Vaginal portion swollen, puffy, lips of os everted, showing deep red, nodular, cervical mucous membrane. A piece removed showed it to be indubitably cancerous. At about 5 months pregnancy the vaginal portion was amputated with knife and scissors, there was moderate hæmorrhage, which was	Abortion at 5 months	Abortion on day following operation. Placenta tolerably firmly adherent, requiring to he manually removed. Endometritis decidua diffusa	—	An elevation of temperature on following day; otherwise recovery normal	5 months after there was no sign of any return of the disease.

	Gyn., 1877, Bd. I, p. 340	nancy	delivery	condition extending up to the inner os; easily bleeding on examination. Diagnosis of cancer not at all doubtful. At about the end of 7th month of pregnancy the cancer was scooped out. Very little bleeding followed operation.	of 7th month); natural efforts	No great hæmorrhage either during or after labour	weeks intra-uterine age)	cence	delivery. Date of death not recorded.
160	Benicke, op. cit., p. 341	4th pregnancy	Symptoms began during pregnancy	Recurring hæmorrhages, profuse discharge. Posterior lip of os uteri thickened, uneven, nodular, easily bleeding. A suspicious ulcer on anterior lip. At about the 5th month of pregnancy the cancer was removed as completely as possible with scissors and sharp spoon; the ulcer on anterior lip also excised. After this symptoms ceased completely	Natural efforts (at term)	Labour lasted 6 hours. Adherent placenta, but no other difficulty	Living	Uninterrupted convalescence	8 weeks after delivery symptoms returned, and a repetition of the operation was contemplated. No further record.
161	Benicke, op. cit., p. 342	3rd pregnancy; convulsions after former labours	2 months before delivery	Pain; profuse hæmorrhages. Vagina filled with a nodular, firm tumour with fissured surface, springing from posterior lip. At 6th month of pregnancy tumour removed with wire ecraseur; Douglas's pouch opened; not much hæmorrhage; symptoms of peritonitis followed.	Premature natural efforts	On the 11th day after operation a dead child expelled by the feet; course of labour normal; bleeding slight. Convulsion seizures, with albuminuria (no casts) on 4th day	Dead	Discharged from charity on 19th day after operation	No further record.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
162	Schröder, Archiv. für Gyn., Bd. X, p. 405, 1876	—	—	In 5th month of pregnancy, amputation of vaginal portion; opening of Douglas's pouch; recovery. No hæmorrhage subsequent to operation. No pain	Natural efforts (at term)	Severe pain shortly before delivery. Natural labour. No hæmorrhage	Not stated	Recovered	Died suddenly 6 weeks after delivery.
163	Galabin, Obstetrical Transactions, vol. xviii, p. 242	31 11th pregnancy	About 13 months before delivery	Constant hæmorrhage; hypogastric and back pain; an epitheliomatous growth was removed with galvanic écraseur when patient was about 4 weeks pregnant, and the stump about a fortnight subsequently freely cauterized. All symptoms ceased	Artificial dilatation of cervix and version, at term	Labour pains came on at term. The cervical canal was then about an inch long, the whole circuit of the os surrounded by malignant growth. The cervix was dilated; first with tents, then with Barnes's dilator. When the os would admit 3 fingers, version was performed. Much traction was required to bring the head through. Considerable hæmorrhage from cervix followed delivery	Living	Recovered	Patient left hospital a month after delivery. Four months afterwards the disease had greatly advanced. Pyrexia during 15 days or more after delivery,
164	Spaeth, from Cohnstein (Case 105)	29 3rd pregnancy	—	Large cauliflower excrescence springing from the posterior lip of os, and projecting in the genital fissure. Vaginal portion strongly dragged down. Excision of tu-	At 8th month	8 days after excision of tumour rupture of membranes. Breech presentation. Normal labour except manual extraction of head	Dead	Recovered	Very severe hæmorrhage during pregnancy.

166	(Case 4) Savory, Obst. Trans., vol. xvii, p. 82	35 9th pregnancy	10 months	Hæmorrhage, alternating with fœtid watery discharge, shooting pains in iliac and saeral region. When about 5 months pregnant a large cauliflower growth was removed, with arrest of symptoms	Delivery premature by 5 or 6 weeks	Labour unusually rapid; neither hæmorrhage nor laceration	Dead	Recovery uninterruptedly good	Two years subsequently the disease had returned.

P.—CASES IN WHICH THE DISEASED PART WAS REMOVED BY THE SURGEON OR SPONTANEOUSLY EXPELLED AT THE TIME OF DELIVERY.

167	Dieterich, op. cit., p. 18	37 3rd pregnancy	About 7 mos. before delivery	Hæmorrhages 7 months. The anterior lip of os enlarged, forming a kidney-shaped tumour, about 2 in. thick by 3 in. long; its length lying transversely. Posterior lip thin and extensible	At term. Removal of part of the disease; incisions; forceps	After pains had lasted about a day without progress being made, a large part of the anterior lip was removed with the loop of the galvanic cautery. No bleeding from the cut surface. Pains continued frequent and strong; the posterior lip yielded, but not the anterior. Incisions were then made into cervix, and forceps applied. To avoid bruising of the diseased anterior lip, incisions were made into the perineum	Living	Died on the 5th day	Autopsy showed peritonitis. The whole cervical portion presented a necrotic, spongy, pulpy mass, reaching down to the insertion of vagina; from its cut surface a creamy juice could be squeezed. Vaginal losses of substance, covered with a diphtheritic layer.

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
168	Arnott, Medico-Chirurgical Trans., vol. xxxi, p. 37	38 Multi-para	Anterior to 5th month of pregnancy	"Anterior lip and right side of os uteri occupied by a hard, rugged tumour of oval form, and of the size of a large green walnut." "Gushes of blood" during pregnancy	Excision of tumour with scissors	The posterior lip of os was soft and thin; but after 2 days' labour pains the os would only admit two fingers. Immediately after the operation (in which not a teaspoonful of blood was lost) the os expanded uniformly, and the child was born in a quarter of an hour	Living	Good recovery	Patient remained well for some months; then attacks of hæmorrhage recurred. An examination was made 8 months after delivery and the disease found to have recurred in the posterior lip of os. She died 16 months after delivery.
169	Michaelis, Neue Zeits. für Geb., Bd. iv, p. 176, 1836	30 7th pregnancy	9 weeks before delivery	Hæmorrhage, severe pain. A soft, cauliflower-like growth springing from the anterior lip of os uteri and filling the vagina. Posterior lip rough, uneven, knotty	Removal of the growth. Turning	Shoulder presentation. Growth removed with scissors, with only slight pain and bleeding. Child then turned	Decomposing. Well-developed	Recovered. Nothing unusual about convalescence	7 days after labour the degeneration of posterior lip was found to have increased. 2 months afterwards the growth from posterior lip was as big as that removed at time of confinement, and symptoms of cancer of stomach. Further course not ascertained.
170	Meigs, Obstetrics, 4th ed., § 730	33 3rd pregnancy	From beginning of pregnancy	Frequent hæmorrhages. Posterior lip of os uteri prolonged into a tumour, which bled at the slightest touch. evidently a mass of cancer	Natural efforts. Tumour expelled. (Slightly prema-	Much hæmorrhage in early part of labour. Dilatation was effected solely at expense of anterior part. After 12 hours' pains the whole	Not stated	Died in 24 hours	Autopsy showed no evidence of either hæmorrhage or peritonitis. Death apparently from shock.
171	Lever,	—	—	Hæmorrhages during	Natural	the child was expelled labour lasted 48 hours.	De-	Convalesced	On examination after

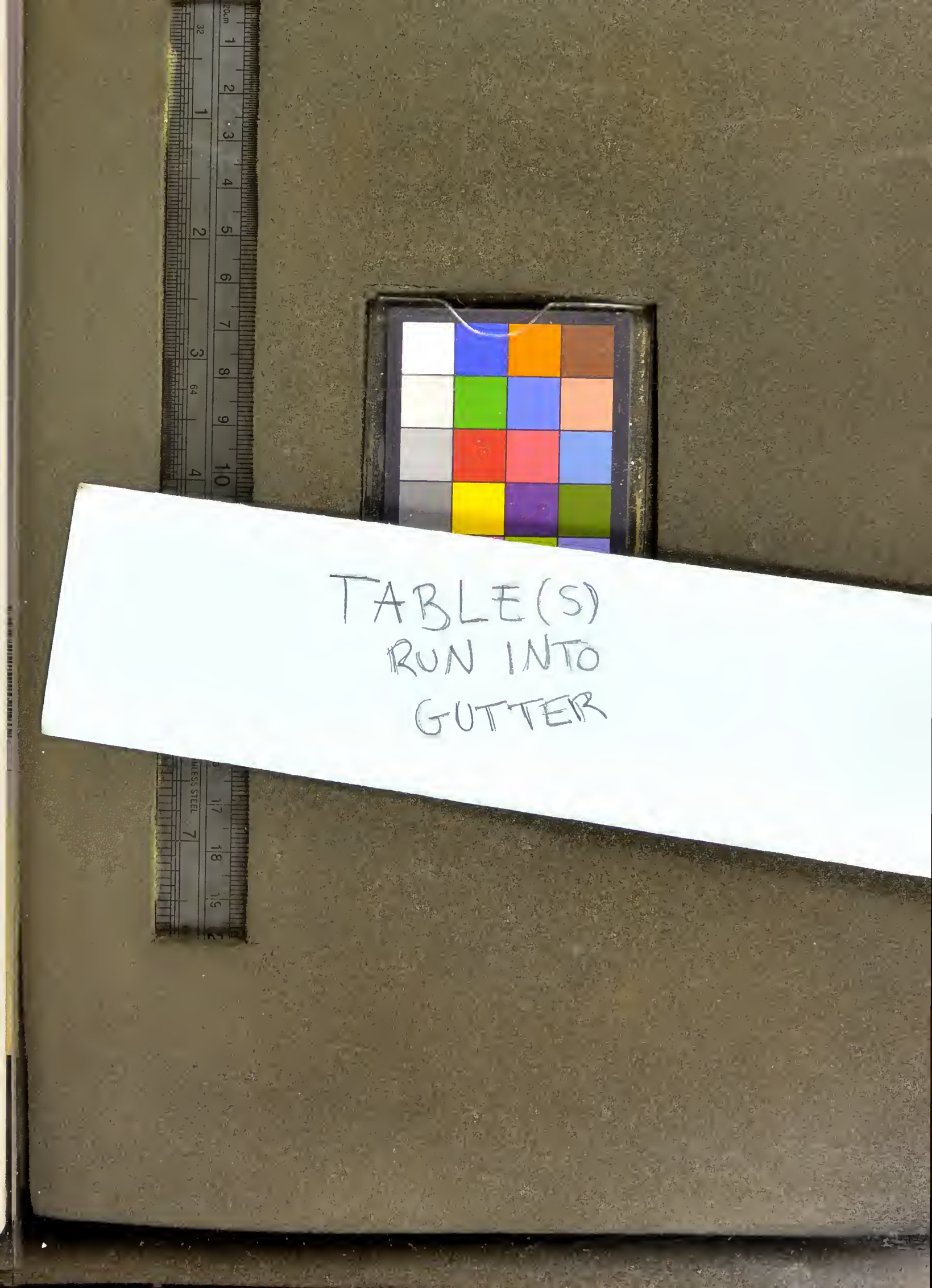
						the child was expelled			
171	Lever, op. cit., p. 224	—	—	Hæmorrhages during pregnancy, no pain. The whole os uteri affected with malignant diseases of a fungoid character; anterior part of cervix indurated	Natural efforts	Labour lasted 48 hours. A very large piece of the diseased mass was torn away, and forced before the head of the child	De-composing	Convalescd very quickly	On examination after delivery the chasm left was so large that the hand might readily have passed into the uterus Patient lived for six months after, and then died from vaginal hæmorrhage.

Cases as to which information is too incomplete for Classification.

172	Lumpe, Schmidt's Jahrbücher, vol. cix, p. 310, 1861	30 multi-para	Longer than the preg-nancy, less than 2 years	Medullary carcinoma had spread over the whole vaginal portion	Footling. Head delivered with forceps	Dilatation of os uteri went on without delay and without consider-able bleeding	Dead, as-phyxia.	—	—
173	Burdach, Schmidt's Jahrbücher vol. xvii, p. 58	39 4th preg-nancy	—	Pain in pelvic region; vesical and rectal tenes-mus and pain; fœtid vaginal disharge; wast-ing. The whole os uteri changed into hard and partly ulcerated nodules the size of a hazel nut	—	—	Dead	8 hours after delivery copious hæmorrhage	Death some months afterwards.
174	West, Diseases of Women, 2nd edition, p. 407	—	—	Extensive cancerous dis-ease of the womb	—	"The os dilated readily to admit of the passage of the child, and the labour was but of a few hours' duration."	—	—	—

No.	Authority and reference.	Age and number of pregnancies.	Duration of disease.	Chief symptoms and signs indicating cancer.	Mode of delivery.	Details of labour.	Result to child.	Immediate result to mother.	Further history.
175	West, op. cit., p. 407	—	—	—	—	"The comparatively small part of the cervix which was not implicated in the disease stretched beyond what might have been supposed possible, and in spite of the unyielding condition of the bulk of the cervix thus made room for the passage of the child."	—	—	—
176	Caseaux, Treatise on Midwifery, Part 5, Chap. vii, § 13	45 multipara	—	Posterior vaginal wall occupied by an elongated tumour, which extended from the posterior lip of cervix to within an inch of the vulva; its surface was irregular and nodular, its hinder part confounded with the recto-vaginal septum	Natural efforts	Dilatation effected very slowly, though completely, at the expense of the narrow lip. The tumour rendered the second stage of labour more tedious than usual. The child's head pushed it backwards and passed in front of it.	—	—	—
177	Schelle, from Cohnstein (Case 30)	40	—	Cancer of the vaginal arch spreading to the vulva.	—	—	Living	Died after 8 days.	—
178	Putegnat, Journal de Med. de Bruxelles,	40 3rd pregnancy	—	Abundant sanious fœtid discharge, sometimes hæmorrhage; severe lancinating pains; a	—	No details given	Living	Died 2 days afterwards.	—

	Lachapelle, op. cit., p. 371			uteri similar to Case 7	ous, vertex presentation at 7 mos.	then three spontaneous fissures of os gave passage to the child	months child, dead			
180	Hugensberger, from Cohnstein (Case 61)	38 9th pregnancy	—	Cancerous infiltration of vaginal portion. Os uteri ulcerated	Natural efforts	Os uteri opened after 96 hours' duration of labour pains	Living	Was "transferred."	—	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